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Convulsions Encountered in General Practice

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The word "Encountered," as used in the caption of this paper, seems to me to be applicable, since it implies the necessity of overcoming an adversary when met. It must be the unusual doctor who can meet with temerity the child or adult patient in a generalized convulsion. This is the only type we shall consider, the many forms of tic and athetoid movements being beyond the limitations of this review.

He who has engaged in the general practice of medicine and surgery for a number of years has necessarily encountered a number of patients in convulsions. The family and friends of these patients, in most instances, regard a convulsion as a dire emergency. For this, they cannot be blamed because the spectacle of a loved one suddenly lapsing into unconsciousness, distorting himself with violent muscular contractions, cyanotic, breathing stertorously and "frothing at the mouth" (to use a favorite layman's expression) is sufficient to induce that panicky feeling in family, friends and possibly ever so slightly in the doctor himself.

It was only a few weeks after I had been licensed to practice the healing art that I encountered a patient in convulsions from a cause not again met in my thirty-four years of practice. I was doing my internship at a coal camp in southern Kentucky where I was the entire medical and surgical staff. A young miner had just gotten home from the day's work in the pit and while his face, hands and overalls were still grimey with lard oil and coal dust, was sitting in a chair leaning against the supporting post of the little porch of his shack. A shower with thunder and lightening came up. With a flash of lightening, a charge of electricity struck the porch and was grounded through the post against which the miner was sitting. Unconscious and in convulsions, he was thought to be dying by his family and the inhabitants of the village, all of whom were in the house that could get in and the rest were milling around on the outside in the rain. The convulsions were controlled by morphine and chloroform and after a few hours the patient aroused from his coma. The stock of the young doctor received a decided boost.

Not long after this experience, I met my first case of puerperal eclampsia. The night was cold and my entire corps of assistants was made up of grannies and neighbors. Following the teaching of the time, Norwood's Tr. Viratrum Viride was administered freely and chloroform cautiously. While discontinuing the chloroform for a time, the most severe convulsion, thus far, seized this young woman and the baby catapulted into the world. Hardly had I cut and tied the umbilical cord when I heard the hurried clatter of heavy boots on the frozen ground. A rap at the door and the messenger said, "Tell the doctor to come on up to my house. My wife needs him right away." After most of the night had worn away, baby number two was born and all was thought to be lovely. Suddenly, I heard a gushing as of falling water and I saw my patient pale and faint. While one fist was yet in her uterus and massage was being used to control the postpartum hemorrhage in this maternity patient number two, again the clank of boots on the frozen ground was heard, this time the messenger bringing the word that patient number one was having another fit. So the night was spent in hustling back and forth between my first case of eclampsia and my first case of postpartum hemorrhage.

My professional life has carried me

through the period when viratrum viride was the chief dependence in controlling convulsions of puerperal eclampsia, followed by the era when eclampsia at any stage of pregnancy in either primipara or multipara was considered an indication for immediate Cæsarean section. Succeeding this period, the more conservative plan of expectant treatment has evolved with a lessened morbidity and mortality. Better still, I have lived to see the public, and expectant mothers in particular, accept and demand careful prenatal care with the resulting decimation of the tragedy of puerperal convulsions.

We are interested in getting a conception of what alterations in cellular physiology occur to produce a convulsion. Every convulsion should be thought of as a manifestation of brain pathology. By this, I do not mean that the cause of the convulsion necessarily originates in the brain, but that the impulse causing the convulsion is transmitted to the brain, there producing an aberration of physiologic cellular activity. The head of the department of medicine of the medical school which I attended was wont to say that a convulsion was an "explosion of nerve force"—decidely figurative you will say, but I doubt if we now have a much clearer concept of the alteration of function when a convulsion occurs.

Cobb lists fifty-six pathological states which give rise to fits and postulates thirteen different physiological mechanisms to explain their occurrence. The intrinsic nature of the subtle disturbance in brain-cell physiology constitutes the unsolved etiologic problem of convulsions. Certain observations are "suggestive," as that the factors which tend tto increase cell-membrane permability are those recognized as favoring the occurrence of seizures; whereas, those which are associated with decrease in permability are known to favor their cessation. To be more specific; excitation, brain trauma, alkalosis, superhydration, anoxemia and high serum lecithin over serum cholesterol increase membrane permability and likewise increase the tendency to seizures; per contra, anaesthesia, sedation, acidosis, dehydration, ketosis and low serum lecithin over serum cholesterol decrease membrane permability and likewise decrease the tendency to seizures.

We have long been taught, probably correctly so, that the convulsion in childhood corresponds to the chill in the adult at the onset of an acute infection.

The subject of convulsions in childhood from the standpoint of etiology has been most satisfactorily clarified by Dr. Peterman of Milwaukee. In 1939, he published the results of his study of convulsions in one thousand patients ranging in age from the neonatal period to sixteen years of age. The following table is a summary of his findings:

Convulsions in children, 1,000 cases.

(Peterman)

	Per cent
Acute Infection	34.0
Idiopathic Epilepsy	23.6
Cerebral birth injury or residue	15.5
Miscellaneous causes	12.7
Tetany	8.9
Cause not established	5.3

Peterman breaks down his findings according to age groups with interesting results. Cerebral birth injury is found to be responsible for 68 per cent of convulsions in infants under one month of age. Treatment of this condition is with sedation; spinal, cysternal or ventricular drainage and vitamin K.

In the age group from one month to 36 months, acute infection heads the list, emphasizing the necessity of preventive measures at this age. Tetany is third at this age (1 to 36 mo.) and is most satisfactorily treated with calcium—calcium chloride by mouth (gavage if necessary) and gluconate intravenously.

From three to 16 years of age, idiopathic epilepsy is the cause of as many convulsions as all other factors combined. The treatment in childhood does not differ essentially from that in adult age. I do not need to tell you that the treatment in most cases leaves much to be desired. The careful and intelligent use of the combined principles of fasting, ketogenic diet, acid-ash control and water restriction is worth the burdensome detail it demands of patient, nurse and doctor. Phenobarbital has been a boon to epileptics, but sodium dilantin has certain advantages over it.

Convulsions in adults differ from those in children in being less frequent and having a different significance. It is, perhaps, worthwhile to remember, as Cabot observes, that practically all causes of coma are also causes of convulsions. Notable exceptions are: opium and sunstroke cause coma, rarely if ever convulsions, strychnine and tetanus cause convulsions, rarely if ever coma. The same author, eliminating cases of alcoholism and cerebral hemorrhage as too numerous and indefinite to classify, lists the causes of convulsions in adults in order of frequency, Epilepsy, Uremia, Hysteria, Meningitis and Puerperal Eclampsia.

There is a tendency among neurologists, which seems to me to be commendable, to be slow to diagnose a case as idiopathic epilepsy. To place a patient in this category effectually brings him face to face with the inscription over the entrance to Dantes' Inferno, "All hope abandon, ye who enter here." Since

there are those cases, though rare, amenable to treatment, as those of hyperinsulinism whose convulsions are stopped when more sugar is eaten; and the cases of hypothyroidism cured by thyroid extract, there is a ray of hope as long as they have not been seared with the brand "Epilepsy."

It may be worthwhile to enumerate the most important factors to be kept in mind as possible causative agents when confronted with a case of recurring generalized convulsions.

At least two-thirds of such cases have their beginning before the age of twenty. I should be slow to diagnose as epilepsy a case of recurring convulsions beginning after the age of forty.

Heredity, though difficult to evaluate as a factor, must be considered.

Brain injuries suffered at any age may produce organic brain lesions with resulting convulsions.

Congenital abnormalities of the brain as microcephalus hydrocephalus, etc., are possible causes.

Brain Tumor causes convulsions in adults more frequently than in children. In explanation of this, it has been pointed out that in children subtentorial tumors are frequent, while in adults, they are more frequently supratentorial.

Syphilis will, now and then, be found to be the explanation of convulsions occurring first at middle-age or beyond.

Toxic agents may be either endogenous as in uremia or exogenous as lead, strychnine and ergot.

Disturbances of intra-cranial circulation as in Stokes-Adams disease may cause convulsions.

The diagnosis is made in most cases on the age of the patient, history and physical examination. Of course, clinical, laboratory and x-ray examinations are helpful and often necessary. Electro-encephalography opens a promising and fascinating field. Possibly, it will add to our knowledge of cerebral function what the electro-cardiograph has added to that of the heart.

The treatment of convulsions is that of immediate symptomatic relief, (which is important) and that of the cause. While a patient rarely dies in a convulsion, it is reasonable to believe that the more prolonged and numerous the convulsions, the greater the probability of permanent cerebral damage.

Curiosity prompted me, recently, to read the treatment on convulsions in childhood by eight different well-known pediatricists. They are unanimous only in their recommendation of enemas and bathing. Three advise morphine and one (Peterman) condems it whole-heartedly, stating that it should never be used because it "masks symptoms, depresses the respiratory center and diminishes or stops peristalsis." Holt mentions ether by inhalation while most of the others prefer chloroform. Chloral hydrate and spinal drainage are favored by a majority. Magnesium sulphate by rectum, intramuscularly and intravenously get the nod by about the same number. Other drugs listed are soluble phenobarbital salts, avertin, aspirin, calomel and castor oil.

Perhaps, I should add a word about convulsions resulting from trauma to the brain. We see most of them among the victims of car accidents. Sometimes, they are induced by the injudicious handing of these patients while being transported from the site of accident, or even in being moved in the course of x-ray or other examinations. Sedation with barbiturates, the use of magnesium sulphate intramuscularly or intravenously, hypertonic glucose intravenously and spinal drainage, are approved measures, one or more of which may be required.

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At the end of the fifth round, the heavyweight staggered to his corner in a dazed and battered condition. His manager approached him and whispered in his ear. "Say, Slugger, I've got a swell idea! Next time he hits you, hit him back!"

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Treatment of Burns

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Thermal injuries continue to be one of medicine's unsolved problems. Progress has been made in their management, especially in the general treatment of the individual and in definitely establishing good surgical principles in the management of the local areas, but the satisfactory therapeutic measure for all burns has not been found.

For the sake of clarity and at the same time attempting to be concise, I have divided the treatment of burns into the following divisions:

1. First aid treatment of burns.
2. Hospital treatment of recent burns.
3. Hospital treatment of old burns.
4. Treatment to promote closing of epithelial defects—skin grafting.

FIRST AID TREATMENT OF BURNS

The first consideration is an examination of the patient for shock. This must be done before any attempt is made to examine the burn. If the patient is not in shock, treatment of the burn may be instituted. If the patient is in shock, he should receive immediate treatment.

a. Treatment of Shock

The patient should be put completely at rest by placing him in a reclining position with head slightly lowered. The body should be protected by wraps to establish and maintain body heat. The pain should be relieved. No drug is better than morphine, but it must be remembered that it should be given in large doses. One-fourth to one half grain doses hypodermically can be given the average sized adult. It should be repeated when necessary. If the patient is conscious and will swallow, give fluids freely by mouth. Hot coffee, tea and clear bouillon with salt are especially useful. Should plasma be available, it should be given at once, giving 5 cc. per pound of patient's estimated body weight.

b. Treatment of the Burn

This treatment is only for those cases not manifesting shock, or those cases that have responded to appropriate shock treatment.

1. The clothes are carefully opened and if necessary, removed with the idea of determining the degree and the extent of involvement. As treatment is concerned, burns should fall into two divisions, Minor Burns and Major Burns.

2. *Minor Burns* should have thorough scrubbing of the surrounding skin and gradually include the burned areas with plain white soap and water, using plenty of water to wash away all dirt and loose debris. With sterile gloves and instruments, the blisters are opened and all loose skin cut free following with free rinsing with sterile saline solution.

After this cleansing, the treatment may be varied, depending upon the part of the body involved. Such areas as the face, hands, feet and genitals are best treated by some form of sterile oiled gauze and bandage. Recently, I have been using gauze impregnated with 5 per cent sulfathiazole ointment with good success.

Other parts of the body may be treated with 5 per cent tannic acid solution followed with 10 per cent Silver Nitrate Solution producing a quick tanned coagulation.

3. *Major Burns.* As a rule, other than removing any clothing sticking to the burn and cleansing away gross dirt, very little cleansing is recommended for these cases. They should be quickly covered with powdered sulfathiazole and sulfanilamide. Over this is laid a layer of sterile oiled gauze, several layers of plain gauze and then sheet wadding or sterile pads, wrapping the entire dressing with stockinet or elastic bandages and sending on to a hospital.

HOSPITAL TREATMENT OF RECENT BURNS

The initial procedures would be the same as those outlined under First Aid Treatment, and the same precautions as to response to shock treatment before any local treatment is attempted, holds good. In the hospital, oxygen can be used in the management of shock.

When the response to shock is satisfactory, move the patient to a warm room preferably around 80° F.

All attendants should wear caps and masks.

All clothing and dressings are removed and the patient is placed upon a bed made up with sterile sheets and over which is a cano-

py frame equipped with electric lights to maintain warmth. Over this frame are placed covers as necessary.

Tests are then made to guide the future general treatment before any local treatment is started.

These are complete blood counts including a hematocrit reading and as indicated general treatment can be carried out along with the local treatment.

The attendants scrub up as for a surgical operation and with proper dress and drapes, thoroughly scrub the burned areas with white soap and water, spending as much time as necessary. Gentleness and assurance to the patient will go a long way in obviating an anesthetic. In those cases where the pain is too severe, an anesthetic may be used. After the cleansing, sterile instruments are used to open all blisters and to remove all loose devitalized skin.

The burn is now ready for local treatment. This treatment will vary according to the degree of burn, to the location of the part, the materials at hand and the experiences of the attendant.

The following have been tried and found efficacious:

Face—(1) Continuous, warm, normal saline packs; (2) 5 per cent sulfathiazole ointment gauze and a pressure bandage.

Hands and feet—(1) Continuous, warm, normal saline packs; (2) 5 per cent sulfathiazole ointment gauze with pressure bandage and splints to maintain position of function.

Genitals—(1) 5 per cent sulfathiazole ointment applied after frequent warm saline irrigations.

Arms and legs—(1) 5 per cent sulfathiazole ointment gauze, plenty of padding and pressure bandages, leaving dressing alone for eight to ten days.

Rest of body—(1) 5 per cent Tannic Acid Solution followed with 10 per cent Silver Nitrate Solution.

HOSPITAL TREATMENT OF OLD BURNS

This treatment will vary according to the general condition of the patient, the time elapsed since burn was sustained, and the amount of infection present.

Those patients receiving first aid with the sulfanilamide and sulfathiazole dressing, if seen within the first twenty-four hours from the time of incidence, may receive the treatment of a fresh burn. After that period they are treated as infected burns.

The aims of this treatment are to clear infection and promote healing. To accomplish this sometimes taxes the ingenuity and perseverance of the attendant.

The general condition must be evaluated and such measures as are necessary to restore normal physiology, are instituted. These will include adequate diet, fortified with vitamins, administration of liver and iron, blood transfusions and internal chemotherapy.

Locally, we strive to establish normal cleanliness of the surrounding skin and open wounds as rapidly as possible. We use the following: Daily tubbing from 30 minutes to one and one-half hours, drying out for 30 minutes under cradle and light, occasionally using ultra-violet light, then applying 5 per cent sulfathiazole ointment gauze, over which are applied warm normal saline packs. Extremities are kept in position of best function and both active and passive motions are encouraged.

It is surprising how many of these will completely heal. Those cases that do not heal and those cases where the loss of skin is great must receive other treatment.

TREATMENT TO PROMOTE CLOSING OF EPITHELIAL DEFECTS—SKIN GRAFTING

Any burn case, whether received fresh or late, that has not healed within two weeks, must be evaluated and studied relative to therapeutic measures that will be of assistance.

In this evaluation, we must know if the wound is clean and as to whether infection is present; we must know if there are complicating factors interfering with the healing. These would be such conditions as abscesses, general constitutional disease as diabetes and arteriosclerosis, nerve injuries producing trophic effects, and last due to extent and location of pressure ulcers.

Naturally, abscesses would demand incision and drainage; the general diseases should be treated and, when possible, pressure areas should be relieved. The nerve injuries are slow to respond and sometimes have to await regeneration of the nerve.

In the uncomplicated case of an unhealed burn that is clean at the end of two weeks, nothing is of more value than a skin graft. It is our preference to use the intermediate thickness or "Split Skin Graft" for all areas on the body when possible. We feel that this type has the greatest chance for healing. It closes the open wound and if the area is located such as would demand another type of graft later, the latter procedure can be followed in a clean and sterile manner.

What is the age at which the greatest number of deaths occur? In the United States, as constituted today, more persons die at age seventy-one than at any other age, except in the first year of life. In 1939—the latest year for which we have data available—there were 108,846 deaths of infants under one year of age and about 30,000 deaths of persons at age seventy-one.—Statistical Bulletin, Metropolitan Life Insurance Bulletin.

Patent Ductus Arteriosus: A Report of Two Cases*

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Although it is difficult to make an exact diagnosis in congenital heart disease and the treatment is very discouraging at best, considerable interest has been aroused since 1938 when Gross[1] successfully ligated a patent ductus arteriosus in a young girl. The operation remedies a defect which, if allowed to remain, may cause retarded physical development, fatal subacute bacterial endocarditis, congestive heart failure, or any combination of these complications.

Congenital heart disease is uncommonly seen and is usually regarded as a medical curiosity for which little or nothing can be done. It is my opinion that in many cases where heart murmurs are discovered in infancy and in childhood, with or without cyanosis, the physician does not attempt to locate the lesion and assumes a negative attitude regarding the treatment. This attitude was not unreasonable in the past but now it can no longer be excused until an uncomplicated patent ductus arteriosus has been excluded. Congenital heart disease consitutes a small percentage of the cases seen by the cardiologist and it is rarely seen by the general practitioner, yet, a patent ductus arteriosus is present in one of every four cases of congenital heart disease. This is somewhat misleading because a patent ductus arteriosus is present as the *only* lesion in but one of every ten cases of congenital heart disease. Abbott[2] made a detailed study of 1,000 cases of congenital heart disease and found that a patent ductus arteriosus was present alone in 92 cases and coexisting with other anomalies in 242 cases. If it can be reasonably established that a patent ductus arteriosus exists alone, then that patient has a good chance to avoid by operation the fatal outcome so frequently seen later on in life. Establishing that fact, however, can be difficult and this is illustrated in one of my cases in which the patent ductus arteriosus acted as a compensatory mechanism for a coarctation of the aorta. The coarctation was not recognized because the cardinal finding was not present, i.e., the patent ductus arteriosus acted as a safety valve, as it were, not allowing the high systolic blood pressure to exist proximal to the coarctation. The other case is interesting because the patient is markedly under-developed physically and infantilism is one of the indications for ligating a patent ductus arteriosus. In this case, however, there is considerable question as to whether the retarded development is the result of the heart lesion.

In reviewing the embryology and physiology of this defect, it is interesting to note that there is no definitely established time of closure of the ductus arteriosus. Christie[3], in a careful analysis of 558 "normal" cases, found that at the age of eight weeks 88 per cent of the ducts were closed, and at the age of one year 5.6 per cent of the ducts were still open. I have been unable to find any critical studies of this subject in normal children beyond one year of age, but it can be assumed that the remaining few must gradually close within a period of a few years since certainly this congenital defect does not exist in such a large percentage of normal adult individuals.

In considering the pathological physiology, several factors will be reviewed: Burwell[4], et al, were able to make circulation measurements in nine cases which were operated for ligation of the ducts arteriosus. In all of their cases, the ductus measured 7 mm. or more, in diameter. They found that from 45 per cent to 77 per cent of the aortic blood (8.0 to 19.5 liters of blood per minute) was shunted through the patent ductus arteriosus to the pulmonary artery. This large arterio-venous fistula causes the left ventricle to put out from two to four times more blood than the right ventricle. If this loss of blood from the peripheral circulation is great enough, it is easy to understand why many of these patients have a retarded physical development which has been stressed by Gross[5]. The overloading of the pulmonary circuit caused some degree of pulmonary congestion and dilatation of the left auricle in all of those cases when there had not yet developed any clinical signs of congestive failure. Another feature which has been brought forth by the surgical ex-

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posure of this defect is the fact that occlusion of the patent ductus arteriosus does not abolish the murmur in many cases. It had been previously thought that the typical continuous murmur with systolic accentuation was produced entirely by the flow of blood through the ductus arteriosus, and its continual nature was caused by the higher pressure existing in the aorta during diastole. That this is often not the case has been demonstrated by several surgeons who have ligated the patent ductus arteriosus. They found that a murmur existing after ligation of the duct could be abolished by compression of the pulmonary artery. In all cases where the ductus is wide enough to produce sufficient findings to make a clinical diagnosis, the pulmonary artery is of greater diameter than the aorta, sometimes it is greatly dilated. It is now believed that the murmur which exists after ligation is caused by eddy currents in the dilated pulmonary artery—and does not, as some believe, prove that another congenital lesion coexists.

The diagnosis is not so difficult to make in an uncomplicated case. Cyanosis does not exist unless there is an associated congenital defect or unless the patient is in cardiac failure. There is a very characteristic continuous (machinery) murmur which is accentuated during systole, and heard best at the second intercostal space on the left. The murmur may be transmitted to the axilla and/or to the apex. Very often there is a distinct systolic thrill over this area. With the above exceptions the other findings are similar to the signs of an aortic insufficiency or a large arterio-venous fistula. There is a high pulse pressure which is affected chiefly by a lowering of the diastolic pressure. In a normal individual, the diastolic pressure is elevated following exercise but in these cases the diastolic pressure is lowered after exercise. There is usually a variable enlargement of the left ventricle. The electrocardiogram shows no specific changes. An X-ray of the chest usually shows an enlargement of the pulmonary artery or a prominence in that area. It is frequently mentioned that the pulmonary arteries pulsate—but the classical "hilar dance" was not present in but one-third of Burwell's cases and was not present in either of my two cases.

The fate of patients with this congenital defect has been summarized by Bullock[6], Jones, and Dalley in a study of 80 cases. These cases were all over three years of age and rarely was difficulty encountered by the patient before the age of six. Twenty-three per cent died of cardiac failure and 53 per cent died of bacterial endocarditis, making a total of 86 per cent dying as a result of their congenital anomaly. Eleven per cent were dead at the age of 14 years, 50 per cent at the age of 30 years, and 71 per cent at the age of 40 years. Two patients lived to the age of 66 years, one of whom went through eight pregnancies without trouble.

Munro[7], in 1907, suggested that these cases might be benefitted if the patent ductus arteriosus could be ligated but no attempt was made to do this until 1938 when Strieder[8] ligated the ductus in a patient who had subacute bacterial endocarditis. The patient died. In August, 1938, Gross[1] first successfully ligated an uncomplicated patent ductus arteriosus in a seven and one-half year old girl. Since then many cases have been reported in the American literature[9-5-10-4-11-12-13-14] with a total of 33 cases most of them successful but with a few sudden deaths occurring because of hemorrhage when the operation was performed on patients who had subacute bacterial endocarditis at the time. Hubbard[15] has carefully considered the indications for operation and lists the following: (1) To forestall the development of bacterial endocarditis, (2) To prevent the onset of cardiac failure (it should be kept in mind that occasionally a patent ductus arteriosus is a compensatory mechanism for a coexisting pulmonary stenosis, aortic stenosis, or coarctation of the aortic arch), (3) Infantilism or delayed physical development.

Case 1, B.E.H., age 31, was first seen on December 2, 1940, complaining of weakness and anemia of three and one-half years. This patient had always been in good health and worked hard as a farmer until June 7, 1937, when he had severe pain in the left chest. Two days following the onset, he had chills and fever and a diagnosis of malaria was made. He was treated with quinine but did not respond to the drug. The physician who saw him during this first illness stated that the patient did not have a cardiac murmur but that the spleen was palpable. The fever and chills persisted for several weeks and finally another physician discovered a murmur over the pulmonic area. A diagnosis of subacute bacterial endocarditis was made and several blood cultures were done, all but one being negative. One culture was positive for staphylococcus and on that basis he was treated for a staphylococcic endocarditis. He was given anti-staphylococcal serum but in spite of very large doses of the serum the patient continued to have a progressively developing anemia, high fever, and his spleen gradually enlarged. He had several transfusions because of the anemia. In 1939, he was started on sulfapyridine and was given huge doses (the exact doses could not be determined) without any blood level studies. Blood began to appear in the urine and gradually he developed gross hematuria. Sulfa-

pyridine was given over a period of several months and was finally discontinued because of severe nausea.

During the course of his illness he had had some precordial distress and repeated attacks of pleurisy, but he had never had hemoptysis. He later began to have numerous petchia, especially on the legs and face. There was some soreness of the fingers but no abscesses developed. Edema of the legs and face began about eight months before I saw him and had gradually increased. Along with this, there was increasing dyspnea on exertion. The patient had not had a temperature above 100 degrees for eight months prior to the time that he came to me.

The past history is essentially negative. This patient had previously been in good health, did not know that he had ever had anything wrong with his heart, and was able to do hard manual labor without discomfort.

Physical examination: Patient was 74 inches tall, pale, the face was puffy, and his legs were edematous, the weight was 150 pounds. Examination of the head was normal except there were about five petechia in the conjunctiva of the right eye. There was no upper respiratory infection and the teeth were in good shape. Examination of the spine and neck was normal. The chest was well developed, expansion was equal, but there was some dullness in both bases. Breath sounds were normal and there were no rales. The right border of the heart by percussion was 1 cm. to the right of the sternum. The left border was at the left mid-axillary line. The rate was 100 per minute and the rhythm normal. The blood pressure was 135/80. There was a continuous murmur in the second interspace to the left of the sternum. This was transmitted upwards and towards the apex. The murmur was accentuated during systole. The murmur was what is called a "machinery" murmur. The abdomen was distended, the spleen was greatly enlarged, the lower border was beyond the midline to the right. Because of the large spleen it was impossible to determine whether ascites was present. The liver could not be palpated. The remainder of the physical examination was normal except for the previously mentioned edema of the legs and there was questionable clubbing of the fingers. An electrocardiogram was normal except for left axis deviation. The blood counts: Hemoglobin 6½ gms.; white blood cell count 5,200, normal differential; red blood cell count 3,400,000. The urine contained 4 plus albumin, with gross hematuria, and numerous casts. The serum protein: total 6.93 gms., albumin 3.5 gms., globulin 3.4 gms. A diagnosis of patent ductus arteriosus was made complicated by an endocarditis with apparent recovery, however, right heart failure was present to explain the splenomegalia and the edema of the extremities.

The patient was put to bed and treated for the congestive heart failure which was present. Although the liver and spleen became a great deal smaller and the brawny edema of the legs disappeared, he developed signs of edema due to nephritis with puffy swelling of the face and hands. This became worse and he became comatose. Finally, 18 hours after a convulsion, he expired. Death was attributed to uremia.

AUTOPSY

The autopsy was done on January 23, 1941, two hours after death. The body was well developed and appeared to have been well nourished. There were no external markings or scars. The ears, eyes, nose and mouth appeared normal.

Lungs: There was no fluid in either pleural cavity. Numerous old dense fibrous adhesions on the lateral and basilar surfaces of both lungs held them firmly attached to the chest wall. In addition to those adhesions there were many plaque-like scars varying from 2 to 5 cm. in diameter scattered over the surfaces of both lungs. Cut sections were dry and crepitant but showed several old, healed infarcts. There were no recent infarcts. Other than this, the lungs were normal with no evidence of congestion or cavitation.

Heart: About 30 cc. of straw-colored fluid was present in the pericardial sac. There were no pericardial adhesions. The heart, arch of the aorta and the pulmonary artery were removed in toto and weighed 906 grams. There was moderate hypertrophy of the right ventricle and an enormous hypertrophy of the left ventricle (Fig. 1). There was moderate dilatation of both auricles. The valve circumferences were as follows: tricuspid 13 cm., pulmonary 9 cm., mitral 10.5 cm., and aortic 7 cm. There was no evidence of old healed, or recent valvulitis except that the mitral valve leaflets were definitely thickened at the free margin and the chorda tendinea of those leaflets appeared to be shortened.

The pulmonary artery was 8.5 cm. in circumference and was larger than the aorta which had a circumference of 7.5 cm. There was a patent ductus arteriosus which was located between the bifurcation of the pulmonary artery and the first portion of the descending aorta (Fig. 2). The ductus had a hourglass constriction at its halfway point. The funnel-like opening of the aortic end of the ductus measured 1.3 cm. The similar shaped opening of the ductus into the pul-

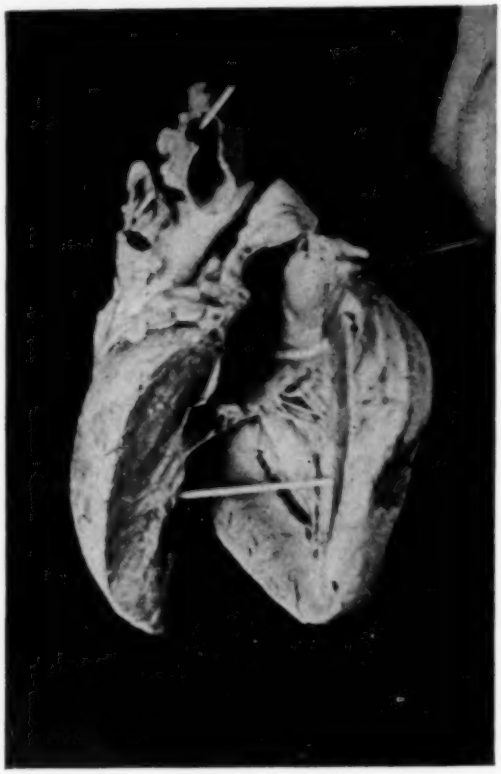

Fig. 1

Showing the enormous hypertrophy of the left ventricle.

monary artery measured 0.9 cm. The lumen of the ductus at the point of constriction was not more than 2 mm. in diameter and would admit an applicator only with difficulty. There was an area 4x3 cm. on the surface of the pulmonary artery where the intima was thickened, scarred and wrinkled. The distal margin of that area was adjacent to the opening of the ductus arteriosus. There were several firm, white warty vegetations crowded around the pulmonary artery opening of the ductus. There was a thin, translucent plaque about 4x6 mm. in the wall of the ductus proximal to the constriction (blood flowed from the aorta to the pulmonary artery). The above described lesions in the pulmonary artery and the ductus constituted the only evidence of inflamation in the heart and great vessels. The aortic valve and pulmonary valve were competent. The ascending aorta and the arch of the aorta appeared normal except for a few atheromatous plaques. However, beginning at the ductus arteriosus the diameter of the descending aorta became smaller and at a point 3 cm. distal to the ductus the circumference of the aorta was only 5 cm.

The myocardium appeared to be normal in color and consistency with no visible evidence of scarring. The left coronary artery was almost twice as large as the right, otherwise, those arteries appeared normal.

Liver: The liver weighed 3284 grams. It was reddish brown in color. On the cut surface, the liver showed the typical nutmeg appearance of passive congestion.

Spleen: The spleen weighed 1359 grams. On the surface the pulp could not be scraped with a knife. No scarred areas were seen.

Kidneys: The left kidney weighed 380 grams. The capsule stripped with ease. On cutting through the substance of the kidney it seemed to be very congested, and numerous small calculi were seen ranging from 0.5 to 2 mm. in diameter. Some of these were present in the pelvis of the kidney. On running the finger across the cut surface of the kidney in some places, it felt gritty. The kidney pelvis was very small. Numerous small hemorrhagic areas could be seen in the cortex and in the medulla. These hemorrhagic changes were more evident in the left kidney than in the right. The right kidney weighed 260 grams and was similar in

Fig. 2

The heart and vessels as seen from the right. The marked narrowing of the aorta is well shown.

appearance to the left, but no stones were found in the right kidney.

The entire gastro-intestinal tract was not removed from the body, but it appeared to be normal. The pancreas did not appear to be abnormal grossly. The bladder and prostate were not disturbed.

Brain: The brain weighed 1812 grams. There was nothing abnormal in its external appearance except that it was wet and heavy. The brain was cut 11 days after having been fixed in formaldehyde. The convolutions over the cerebral convexities were slightly larger than normal but were not flattened and the sulci were not narrowed. The blood vessels at the base of the brain appeared normal. Palpitation did not reveal any hard areas. Coronal sections were made beginning from the tips of the frontal lobes and extending backwards. At the level of the tips of the anterior horns an area of softening was found in the white matter of the left frontal lobe. This extended backwards almost to the beginning of the posterior horn. It was 7 cm. in diameter. This area was like thin paste and there was no evidence of hemorrhage into it. The blood vessels in and around the lateral ventricles of both hemispheres were congested and quite prominent. The area of softening in the left hemisphere involved the internal capsule and the basal ganglia. The ventricles were not displaced nor flattened. There was no evidence of internal hydrocephalus.

Microscopic Findings: The kidney showed some of the glomeruli to be very large and cellular. The capsules were wide. There were areas of fibrosis with lymphocytic infiltration in the cortex. In some of the tubules red blood cell casts were found. The epithelium in some of the convoluted tubules was low and degenerated. No sulfapyridine crystals were found in the tubules. The liver showed some areas of focal necrosis with round cell infiltration. There were no abscesses. The spleen showed many sinuses filled with blood cells. The lymphfollicles were large.

Final Diagnosis: Patent ductus arteriosus and coarctation of the aorta, healed subacute bacterial endarteritis, chronic passive congestion of the liver and spleen, chronic hemorrhagic nephritis, renal calculi, healed pulmonary infarction (multiple) with fibrous pleural adhesions, and encephalomalacia.

Comment: The enormous hypertrophy of the left ventricle reflects the great amount of work required by the heart to maintain an adequate peripheral circulation in the presence of a patent ductus arteriosus. There is little evidence to indicate that the endarteritis was responsible for this hypertrophy except late in the course of the disease when the ductus became almost closed leaving the coarctation of the aorta as an etiological factor. The part played by the coarctation in causing the hypertrophy was not very great, however, because the coarctation was not severe and there was no hypertension proximal to the coarctation after the closure of the patent ductus arteriosus. It seems reasonable that the resistance to the circulation offered by the coarctation, little as it may have been, did cause a larger blood flow through the ductus than would otherwise have occurred, thus placing some additional load on the left ventricle. There is no question that a patent ductus arteriosus may be a compensatory mechanism for a coarctation of the aorta, stenosis of the pulmonary artery, or stenosis of the aorta proximal to the ductus resulting in a reverse flow of blood from the pulmonary artery to the aorta (fetal type), however, in the latter two conditions cyanosis would probably be present depending upon the severity of the stenosis. It follows that if a coexisting stenosis of the great vessels is present then ligating the ductus would throw a greater load on the heart and may hasten death.

The endarteritis being confined almost entirely to the ductus and pulmonary artery explains the numerous healed pulmonary infarcts and pleural adhesions. No emboli could reach the peripheral circulation without first passing through the pulmonary circuit. This occurs in almost all cases of this type. The vegetations are confined to the pulmonary artery. This process is just the opposite to the usual case of bacterial endocarditis where the vegetations occur primarily on the mitral valve and in the left side of heart, resulting in peripheral abscesses due to infected emboli being carried away. This man never had any lesions to suggest peripheral abscesses, even when he was having frequent pulmonary infarctions.

Although the large doses of sulfapyridine apparently cured the endarteritis, at least there was no evidence of activity for eight months prior to death and at autopsy the vegetations appeared old and healed, the kidneys suffered tremendously because of it. Though he had been acutely ill for many months before sulfapyridine was given, he had never noticed hematuria. Soon after the drug was started he had hematuria almost constantly until he died—and long after sulfapyridine was stopped. Helwig[16] has recently suggested that permanent kidney damage may result from the use of the sulfonamide drugs, and it seems in this case that the hemorrhagic nephritis was not on the basis of embolic phenomena as is usually present with bacterial endocarditis.

The patient had consented to have the

patent ductus arteriosus ligated and was anxiously awaiting some improvement in his general condition so that the operation could be more safely done. Instead of improving he died of nephritis with associated softening of the brain. At autopsy the very thin translucent wall of the ductus was discovered. This thin wall probably could not have been recognized during life and any attempt at ligation would probably have caused immediate rupture and death from hemorrhage. Several months before death he developed congestive right heart failure with enlargement of the liver and spleen. This may have occurred regardless of whether the ductus was ligated.

In conclusion, it seems safe to say that this man's death was caused by a complication of the treatment for a bacterial endarteritis which in turn was a complication of a patent ductus arteriosus. Had the ligation been done early in life at least the contributing cause of death would have been removed. In retrospect, it seems likely that he could have lived with the coarctation of the aorta since many patients live longer than he did with more severe coarctation. Congestive hear failure may have been forestalled but, of course, it is not assumed that it would not have eventually developed.

Case 2, B.J.S., age six, was first seen on March 2, 1941, because of a temperature of 100 degrees and a history of a severe sore throat and high fever of several days duration. She made an uneventful recovery from this throat infection. On examination, it was suspected that the child had a patent ductus arteriosus. The mother states that the delivery was normal, she was breast fed, and nothing abnormal was noted at birth except that the baby was short. She weighed 8¾ pounds, and the weight gain at first was normal. When the child was about three or four months old, the mother, who is a nurse, noticed that the baby's heart was pounding.

She was seen by a pediatrician at the age of two because of her small stature, and at that time a diagnosis of congenital heart disease was made. It was thought by him that the diagnosis was a patent foramen ovale. The small stature was though to be on the basis of a thyroid deficiency, and she was given thyroid medication for a period of two years. During that two year period, there was no spectacular gain in height or weight. This child has not been ill except when she was two and one-half years old when she had pneumonia which lasted for three days. She has never had heart failure and is able to run and play without any limitations. She is of average intelligence and is doing well in school.

The physical examination at the age of six and one-half years: Weight is 40 pounds, and the height is 39½ inches with shoes. The child is well proportioned and resembles a pituitary dwarf. Examination of the head, the eyes, the ears, nose and throat elicited no abnormal findings. The neck and spine were normal. The chest is normal in shape and expansion is equal. Both lungs are clear. The heart: The left border is at the left midclavicular line and there is no enlargement to the right. There is no cyanosis and no evidence of right heart failure. Her blood pressure is 110/40, and the pulse rate is 80, rhythm normal. There is a loud continuous murmur located in the second interspace to the left of the sternum. This is transmitted in all directions. It is a typical "machinery murmur" with accentuation during systole. There is a palpable thrill over the area where the murmur is most intense. The electrocardiogram is normal and an X-ray of the chest indicates that the heart and great vessels are normal. There is no visible pulsation of the pulmonary artery (hilar dance). The abdomen is normal. A diagnosis of a pure, uncomplicated patent ductus

Fig. 3

Case 2, B. J. S. Now 7½ years old. Height 41 inches. The circle on the chest is where the "machinery murmur" is loudest.

arteriosus, and dwarfism, probably a pituitary type, was made.

Comment: There is a reasonable question whether the retarded physical development is related to the patent ductus arteriosus since her stature is similar to that type seen in pituitary dwarfism rather than the asthenic type which is usually present when a patent ductus arteriosus is the etiological factor.

The diagnosis of patent ductus arteriosus was confirmed at a well known clinic in the midwest where she was referred to have the ductus ligated. The operation, however, was not advised, the only reason given was that she should be observed for a time—now, almost a year. Regardless of the etiology of the dwarfism which in itself will not shorten her life, there remains the very likely possibility that she will develop subacute bacterial endocarditis sooner or later. In patients who do not have, or, have not had this usually fatal complication, the operative risk is not great. Every sore throat and upper respiratory infection is an obvious invitation to the development of subacute bacterial endocarditis in her present condition. An unfortunate aspect of this case is that the parents returned home firmly convinced that the operation will never have to be done.

Conclusion: The successful closure of a patent ductus arteriosus has been accomplished by ligation in a number of reported cases. This outstanding surgical contribution now affords a positive therapeutic measure for many patients with this disease who are otherwise almost certainly doomed to premature death or maldevelopment. Two cases have been presented: One to illustrate what may happen to such a patient without having the operation done, the other is presented as an unusual case of dwarfism with a patent ductus arteriosus who should have the operation done.

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A Radiologist's Viewpoint In the Treatment of Some Common Diseases*

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MCALESTER, OKLAHOMA

In the past two decades, irradiation therapy of physiological and pathological diseases and dysfunctions has expanded so rapidly in every specialty of medicine, that the average physician has not been able to assimulate or get acquainted with the multiple uses of this therapy. The radiologists as a group have been backward in their endeavors to inform their colleagues in their respective communities of the uses of X-Ray and radium irradiation as a supplement or compliment to their usual therapeutic measures. Perhaps it has been the thought or discomfort of being accused of competing with his colleagues that is responsible for this reticent attitude. The radiologist's approach in the past has therefore been "let me demonstrate the value of

*Read before the Pittsburg County Medical Society, September, 1942.

**Doctor Greenberger is now in the Army and is stationed at Carlisle Barracks, Pa.

irradiation therapy in this particular case." The teaching process has therefore been necessarily slow, but these personal demonstrations have helped to place irradiation therapy on a conservative and sure footing in the community served by the radiologist.

In the following paragraphs, this radiologist expresses his viewpoint on the treatment of some of the more common diseases, as tonsillitis, sinusitis, hyperthyroidism, inflammatory lesions, benign uterine bleeding, carcinoma of the breast and womb. Each unrelated subject is presented in the style or manner that I would use in writing or talking to one of my colleagues in my community who consulted me in regard to the particular subject.

CARCINOMA OF THE BREAST

Carcinoma of the breast is either a surgical problem or essentially a radiological problem. In Group one cases, where the tumor is confined to the breast, radical mastectomy is indicated. No definite improvement in results can be expected by pre or post operative irradiation. In Group three cases, where more than two axillary glands larger than two centimeters are present, and the skin over the breast is fixed or involved by the tumor, a radical mastectomy will tend to hasten the patient's death rather than aid in recovery. Such patients should be treated by irradiation alone. In Group two cases, where only a few minute axillary glands are present and the skin is not involved, pre-operative and post-operative X-Ray irradiation will increase the number of five year survivals.

There is no place for a simple mastectomy in treatment of carcinoma of the breast, even for palliation in a foul ulcerating lesion. X-Ray irradiation will clean up such ulcerating lesions easier and better than surgery.

In Group two cases, it is advisable to have roentgen studies of the entire spine, pelvis and chest before the mastectomy in order to detect any possible metastasis.

CARCINOMA OF THE CERVIX

This is entirely a radiological problem. An amputation of the cervix can be done in the rare Group one cases, but the surgeon can't be sure that there is not already a lymphatic spread to the fornix and adnexa. The radical Wertheim hysterectomy is definitely contraindicated in the treatment of cancer of the cervix.

Radium therapy is the most valuable agent in treating all types of cancer of the cervix. It should be applied only by a physician who understands the necessity and importance of distributing the radium so as to obtain the most effective dosage in the vaginal fornices and adnexa and within the cervix and body of the uterus of the particular case treated. Radium thus properly distributed in the vagina and womb will destroy the carcinoma in the cervix and in the adjacent parametrium for about three to four centimeters. If a cure is desired in Group two and three patients where the adnexa are involved, a series of deep X-Ray treatments given over the pelvis through multiple ports must supplement the radium therapy.

TUMORS OF THE UTERUS

An endometrial biopsy should be performed on every woman with abnormal uterine bleeding a few years before, at, or beyond the menopause, and a radium tandem inserted in the womb after the curretage. A dosage of 1500-2400 mg/hrs. of radium should be given if the scrapings look benign, a dosage of about 3600 mg/hrs. if carcinoma is suspected.

If the biopsy confirms the clinical impression of a carcinoma of the fundus of the uterus, then a radical hysterectomy is performed about five to six weeks after the radium therapy. This combined treatment of radium and surgery will cure a larger number of patients with fundus cancer than when surgery is used without preliminary irradiation.

Radium therapy alone is used in treatment of fundus cancer only when the patient is considered a poor risk for hysterectomy. By distributing the radium evenly throughout the fundus by means of multiple tandems and thus administering large doses, many cures by radium therapy alone are obtained.

BENIGN UTERINE BLEEDING

(a) Due to Fibroid Uterus.

Hysterectomy is the treatment of choice in all large uterine tumors and most small tumors. Surgery definitely determines whether the tumor is uterine or ovarian, whether it is benign or malignant.

If the diagnosis of fibroid can be definitely determined and the uterus is less than four months gestation in size, external irradiation alone or combined with intra uterine radium therapy will promptly stop the bleeding and later cause a marked regression in the size of the uterus and fibroid tumor. The same therapy is used with only fair results in the large fibroid uterus and therefore used only in patients who are poor surgical risks.

(b) Due to Endocrine Dysfunction.

I do not believe that any surgeon should perform a hysterectomy on a young woman with a normal size uterus and normal adnexa because of her profuse menstrual bleeding. When the proper endocrine preparations fail, a small dose of radium applied within the womb (about 500 mg/hrs.) will stop the bleeding promptly, and in most cases will not cause any permanent damage to the ovaries.

When the abnormal bleeding is due to men-

opausal changes, external irradiation to the pelvis is the ideal treatment to permanently stop the uterine hemorrhage.

HYPERTHYROIDISM

Is X-Ray irradiation for hyperthyroidism preferable to thyroidectomy? Many radiologists claim that irradiation is the better treatment for hyperthyroidism except in those patients who have large tumors sufficient to cause pressure symptoms and those who are extremely toxic with B.M.R. of about 70 plus.

Many good statistical papers have ben presented by these radiologists. Their percentage of cures run about 80 to 85 per cent. Most surgeons doubt these figures, and feel that surgery should be done on all toxic thyroids.

I feel that thyroidectomy performed by an experienced surgeon is preferable to irradiation therapy, but irradiation is far superior to bungled thyroid surgery. A patient with a B.M.R. of over 35 requires strict bed rest and supervision. The surgeon is the one who can enforce such proceedures, the radiologist can not.

The hyperthyroid patient usually referred to me by my colleagues for irradiation therapy are patients (1) whose B.M.R. is less than 35, not toxic enough to require an operation, (2) recurrence of toxic symptoms following thyroidectomy, (3) patients with some systemic disease where surgery is considered inadvisable and (4) those who refuse any surgery.

NASAL SINUSITIS

In those cases of acute sinusitis where no relief from pain is obtained by the usual therapeutic measures, the application of one or two small doses of X-Ray irradiation will often produce prompt relief from the severe headaches.

Irradiation therapy is a real adjunct in the better management of those cases of subacute and chronic sinusitis who continue to have pain and purulent discharge in spite of proper topical nasal applications and surgical drainage of the affected sinuses. In over 60 per cent of the cases treated with X-Ray, a marked prompt clinical improvement or cure can be expected. The roentgen rays act directly on the inflamed edematous or hypertrophic mucosa.

The dose usually administered is about two-thirds of an erythema dose delivered in one to four treatments.

The results of X-Ray irradiation in the treatment of chronic sinusitis with large polypoid formation is not good. The Caldwell-Luc or similar operation is the better therapy in these cases. X-Ray irradiation is of little value in allergic sinusitis.

Irradiation therapy is the simplest and the best proceedure in the treatment of sub-acute and chronic sinusitis in children. Medical management is usually difficult and surgical drainage usually inadvisable in children. The percentage of cures in children thus treated are much higher than in adults.

TONSILLITIS

A few years ago, several popular magazines extolled the virtues of X-Ray treatment for chronic tonsillitis. The radiologists subsequently received many requests from patients who desired this non-operative form of therapy. To have accepted all these patients for such therapy would have invited just criticism from the otolaryngologist and general practitioner. I feel that the radiologist has a useful role in the management of certain cases of tonsillitis without competing with the otolaryngologist and general practitioner.

Tonsillectomy is the simplest and best proceedure in the treatment of chronic tonsillitis in children. In twenty-four hours, the child is ready to partake of its regular diet. If there is a marked or moderate enlargement of the tonsillar and cervical glands associated with the tonsillitis, X-Ray irradiation of the glands should preceed the tonsillectomy. A small single dose of X-Ray will cause a rapid decrease or a disappearance of the glands within ten days. The radiologist receives excellent cooperation from the otolaryngologist in treating such cases.

Many physicians procrastinate in performing a tonsillectomy for badly infected tonsils in children below three years of age. Otitis media is a frequent complication in such cases. A few small doses of X-Ray applied to the tonsil area in these youngsters will cause the pain, swelling, dysphagia, and the infection in the tonsil to disappear. The tonsillectomy can be done when the child is older.

In contrast to children, an adult who undergoes a tonsillectomy usually continues to have a sore throat and malaise for several days after the operation. This is especially true in the elderly individual. In this group of patients, X-Ray irradiation to the tonsils produces results comparable to tonsillectomy without the associated discomfort. The dose administered is about an erythema dose (500-600 r) to each side, applied in three to four treatments.

Irradiation therapy is preferable to tonsillectomy in all cases where the tonsillar or lymph tissue is scattered on the pillars, tongue, and adjacent pharyngeal wall. The lymphoid tissue is very responsive to the small doses of X-Ray, and the tonsil tissue in these cases disappears completely.

Irradiation is of value in recurrent tonsil-

litis following tonsillectomy. X-Ray irradiation is the treatment for patients who have bleeding tendencies, and others who can not undergo a tonsillectomy.

INFLAMMATIONS

X-Ray irradiation is the most effective tool that the physician can use in the treatment of his patients with single or multiple boils and carbuncles, particularly those located on the face, back of neck, auditory canal, and axilla. If applied early, X-Ray causes resolution without suppuration. When applied to the full blown lesion, X-Ray causes the lesion to point and thus permit early drainage.

X-Ray therapy is most effective in all inflammatory lesions of the skin, in cellulitis, lymphangitis, and erysipelas, and associated infectious adenitis.

It is the ideal treatment in acute parotitis the gland either subsides or it becomes fluctuant in two or three days and thus ready for surgical drainage. The application of radium or X-Ray irradiation to an acute parotitis that follows some abdominal operation is often life saving.

NEURITIS AND NEURALGIA

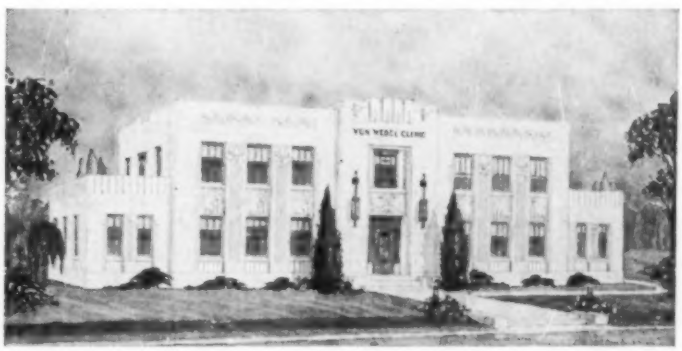
Any agent that can relieve or stop completely the severe pain in many of the patients afflicted with neuritis or neuralgia is worth a good trial. X-Ray irradiation directed to the involved roots or nerves accomplishes such clinical improvement and cures in many cases, and therefore should be used before any nerve block or nerve resection is contemplated. I have had fairly good results in treating trigeminal neuralgias, peripheral facial nerve neuralgia, and herpes zoster, with X-Ray irradiation. Also, a large percentage of cases with functional pruitis of the anus or vulva are relieved or cured by irradiation.

CONCLUSION

The reason for this unorthodox type of paper is to enable me to present a summary on the management of some common and important diseases—from a radiologist's viewpoint. I purposely included three highly controversial subjects—hyperthyroidism, tonsillitis, and sinusitis. Irradiation therapy has a definite place in the treatment of these diseases. The type of cases suitable for such therapy have been briefly outlined.

I hope this paper serves as a guide to some physicians and surgeons by enabling them to evaluate the aid they can expect from irradiation therapy in their management of the diseases discussed.

VON WEDEL CLINIC



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November 30, 1942

James D. Osborn, M.D.
President, Oklahoma State Medical Association
Frederick, Oklahoma

Dear Doctor Osborn:

On behalf of the Directing Board of the Procurement and Assignment Service, I wish to express to the Oklahoma State Medical Society its sincere thanks and appreciation for the loan of Mr. Richard H. Graham to work in our Central Office. Mr. Graham did an excellent piece of work with us, and we deeply appreciate his services.

It is gratifying to learn that the State Medical Societies are cooperating in every way possible, and I want you to know that the Procurement and Assignment Service in Oklahoma is doing an excellent job.

With kind regards and many thanks, I am

Sincerely yours,

Frank H. Lahey, M.D.
Chairman, Directing Board

(President's comment: The above letter is self-explanatory, and the commendation of our Executive Secretary will not be surprising to any member of the State Medical Association. The service to the Procurement and Assignment Service of the War Manpower Commission is in line with Oklahoma's response to Procurement and Assignment, and the State Medical Association is proud to have had this opportunity to serve.)

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EDITORIALS

*THE VALUE OF COD LIVER OIL AND TOMATO JUICE IN THE PREVENTION AND TREATMENT OF INTESTINAL TUBERCULOSIS COMPLICATING PULMONARY TUBERCULOSIS**

The family physician occupies a singular and important position in the treatment of pulmonary tuberculosis. It is he who treats the majority of tuberculosis patients for weeks or months before sanatorium care is available. Experience has taught us that intestinal tuberculosis frequently develops during this period. As it is the most frequent, and one of the most serious, complications of pulmonary tuberculosis, it seems worthwhile to emphasize a simple, effective means of prevention and treatment which can be employed in the humblest household.

Intestinal tuberculosis was generally regarded as a fatal complication of pulmonary tuberculosis prior to 1921. In that year, Blanchet demonstrated that ultra-violet irradiation was a valuable method of treatment, and his findings were confirmed by other workers. There were, however, certain disadvantages to the general application of this form of therapy, including the cost of the apparatus and the need for electrical installation.

Therefore, in 1926, we sought an effective method of treatment which could be used in any home or sanatorium. For reasons stated elsewhere, cod liver oil and either tomato or citrus fruit juice were administered to patients suffering from intestinal tuberculosis. These studies disclosed that the administration of the remedy, as here outlined, was more effective in the treatment of intestinal tuberculosis than ultra-violet irradiation; the patients responding more promptly and in greater numbers. This led to the routine use of the "cocktail" in treating intestinal tuberculosis at Ray Brook and many other sanatoria both in this country and abroad.

Subsequently, the remedy was tried as a prophylactic measure with gratifying results. For example, prior to its use as a prophylactic measure, approximately eleven per cent of our patients with moderately and far advanced pulmonary tuberculosis developed intestinal tuberculosis while under observation; whereas, subsequent to its routine administration, the incidence fell to one per cent, and has remained at that low level for the past fourteen years.

*This editorial was contributed by Dr. Mack McConkey of Ray Brook, New York. Dr. McConkey is an honored son of Oklahoma whose cod liver oil cocktail, now widely employed in this country and abroad, has saved much suffering and prolonged many lives.

The method of administration is simple and few patients object seriously to the remedy when it is properly given, but attention to detail is important. Three ounces of tomato, or cirtus fruit, juice are placed in a glass about half the size of an ordinary tumbler. On the surface is floated half an ounce (a large tablespoonful) of plain cod liver oil. The "cocktail" is chilled and served immediately after each meal. The patient should be told that slight gaseous eructations savoring of cod liver oil may be experienced for the first week or so of treatment, but that they will not be noticed thereafter. In certain instances, it is necessary to substitute cod liver oil in ten minim capsules for the usual half-ounce of oil for a week or so. Patients suffering with intestinal symptoms are given one quart of milk daily in addition to the "cocktail."

SILENCE AND SUNSHINE

In the year 1847, Kussmal was studying at the University of Vienna. Much of his time was spent "in the small, poorly equipped morgue" where the great pathologist, Rokitansky was making his daily contributions to our knowledge of gross pathology and building his astounding record of 30,000 autopsies.

Kussmaul left the following interesting picture of Rokitansky. If the reader permits his imaginatiton to flow between the lines of this paragraph, he will sense the motivating principles in the lives of these two great men.

"The facial features of Rokitansky bore the stamp of great kindness of heart and of dependableness. Everyone respected him. He was extraordinarily silent. In the morgue he opened his mouth only to dictate the protocol. After I had been a constant visitor at the morgue for four months, it happened one beautiful autumn morning that the scalpel rested for a short period. I took advantage of the short recess by stepping to the door in order to enjoy the fresh air. Soon after Rokitansky came and stood near me in the sunlight, which he enjoyed noticeably. Suddenly he turned toward me, greeted me pleasantly, and said: 'This is nice weather.' I was dumbfounded. Had the daughter of Jairus suddenly arisen from the dead and come to me from the morgue with a loud greeting I would not have been more surprised. I composed myself, however, and answered: 'Yes, this certainly is a nice day.' The conversation was finished. It was the first and only conversation in which I heard him take part."

OUR STATE MEDICAL ASSOCIATION

Among the institutions to which we as doctors and good citizens owe allegiance stands the State Medical Association. While the church stands for religious freedom and fosters the moral and spiritual integrity of the home, the State Medical Association represents the orthodox practice of medicine without which the physical welfare of the home would be insecure.

In this day of organization for political and economic preferment often at the expense of those who are passive or disinterested, it is time for doctors to stand by the one organization which champions their legitimate cause. The State Medical Association is not asking any favors or seeking any advantages which are not in keeping with the public weal. For its members, it merely seeks the privilege of continuing the individual practice of medicine as it has always been carried on in the United States and as it should be pursued in every free country. All doctors who are interested in their professional freedom and the physical welfare of their people should liberally support the State Medical Association.

During the war, this responsibility rests heavily upon those doctors who remain at home. Our professional way of life must be preserved. We must keep the faith with those who face the guns. Through organized effort, we must take care of the civilian needs and save a place for those members of our profession who wish to return to civil practice. We must find a solution for all our local problems and thereby relieve the Federal Government and big industry of the excuse for various government and pre-paid group services which rob the doctor of personal dignity and initiative, making him a kin to the inanimate cog in the so-called wheel of progress.

These ends can be achieved only through organized effort directed by the State Medical Association. This means keeping up membership in the State Association even though dues have been increased: also, ready response to every call for service including faithful attendance upon committees and scheduled county and state meetings.

In addition, every member, through his professional and public relationship, should strive to bring medicine into popular esteem. Only through the loyalty and integrity of its individual members can the State Medical Association attain the high position it deserves and wield the influence necessary to protect the doctor and society from the devastating influence of regimented medicine.

THE DOCTOR'S REWARD

Everywhere from the smart-set to the slums, the honest, capable doctor is welcome. Regardless of the social or economic level, he seeks only the truth and the opportunity to serve. He is never too seedy for the fastidious, never too polished for the poor.

The sun and the moon stand still when the doctor is urgently needed. His arrival is a signal for people to give way and humbly stand by because of his unobtrusive authority.

There are moments in the mansion when the doctor takes precedent over the most important social and financial events. There are crises in the slums which shatter all class distinctions and call for the best medicine can give. To come natural to people and to be sought by all classes, when trouble strikes, means more than silver and gold.

THE ALPHABET ABUSED

The innocent old alphabet never anticipated spelling "bureaucrat" and submitting to the flagrant abuse of its modest characters through the capitalized designation of government bureaucracies. The word "Bureaucrat" does not appear in Samuel Johnson's Dictionary (1799). He describes bureau as "a chest of drawers with a writing desk."

The Encyclopedia Brittanica says the term bureau "is used of certain subdivisions of the executive departments" and goes on to say "the term bureaucracy signifies the concentration of administrative power in bureaux of departments, and the undue interference of officials outside the scope of state interference."

Webster gives the following definition of bureaucracy: "a system of government by bureau heads, responsible only to administrative officers above them, having complete power over subordinates and, in official duties generally, not subject to the common law of the land." Webster says a bureaucrat is "an official confirmed in a narrow and arbitrary routine or established with great authority in his own department; a member of a bureaucracy."

Under his definition of bureau, Samuel Johnson quotes Swift as saying:

"For not the desk with silver nails,
Nor bureau of expense,
Nor standish well Japaun'd avails
To writing of good sense."

Our American application of the word bureau has not absolved it from Swift's criticism. The exercise of good sense is not a distinguishing mark of the bureaucrat. About 1805, the statesman, Fisher Ames said: "It is party that bestows emolument, power and consideration, and it is not excellency in the science that obtains the suffrages of party."

The regular medical profession, always in search of the truth, has never been guilty of embarrassing the alphabet. Science is truth, it thrives on silence and obscurity, it is eternal, it seeks no fan-flare, but is content to appear in small type in order that it may find room among the world's treasures.

The search for knowledge in the field of medical science and its practical application are incompatable with bureaucratic control and can never click with the clock on any fixed hourly basis.

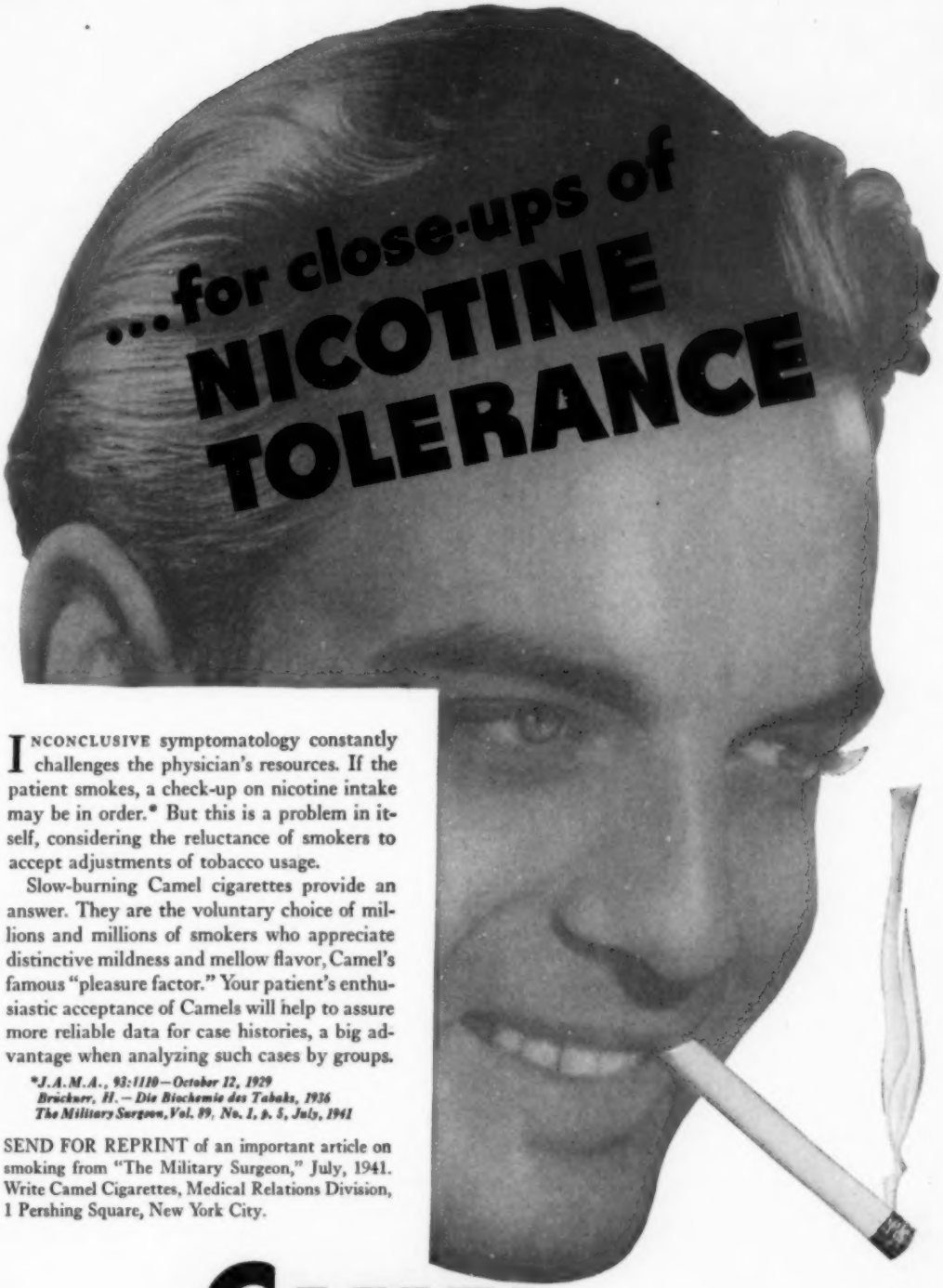
It is to be hoped that medicine may escape the leveling influence of the cold impersonal, arbitrary control of bureaucracy. Voluntary service, free initiative and independent action constitute the doctor's chief ailment. Without these, medicine will become an anemic, spiritless profession incapable of sustaining its fine traditions.

The people must be permitted to judge the inequalities of medical skill and professional virtue. They must have the privilege of choice. The medical profession should not be humiliated by bureaucratic control with an alphabetical designation. Already bureaucratic blanks coming out of Washington with enigmatic books of instruction are giving the average citizen who would like to be about his country's business, an obdurate headache, which destroys his equanimity and devours his initiative.

As the honest doctor contemplates socialized medicine, with its annulling thralldom, he thinks of the free spirit of Patrick Henry with glowing admiration. He wonders if medicine should not take a stand, not so much in behalf of a great profession, but for the welfare of a free people, who in the face of government concern, must be born, must encounter the ills of the flesh and ultimately die. These are intimate, personal experiences, sacred to the individual and the home and, as a rule, shared only by trusted and privileged medical and spiritual advisors.

(Since the above editorial was written a hard-working doctor-friend has reported that, while seeking a C gasoline card, he appealed to a Washington representative of the Gasoline Rationing Bureau and received the following response: "Oh, yes, you are one of these doctors who expect everything and give nothing." This agent of the bureaucrats, who is wholly dependent upon the taxpayers for a living, was insulting a good citizen whose service to the poor annually runs into thousands of dollars.)

"I congratulate poor young men upon being born to that ancient and honorable degree which renders it necessary that they should devote themselves to hard work."—Andrew Carnegie.



INCONCLUSIVE symptomatology constantly challenges the physician's resources. If the patient smokes, a check-up on nicotine intake may be in order.* But this is a problem in itself, considering the reluctance of smokers to accept adjustments of tobacco usage.

Slow-burning Camel cigarettes provide an answer. They are the voluntary choice of millions and millions of smokers who appreciate distinctive mildness and mellow flavor, Camel's famous "pleasure factor." Your patient's enthusiastic acceptance of Camels will help to assure more reliable data for case histories, a big advantage when analyzing such cases by groups.

J.A.M.A., 93:1110—October 12, 1929
Brückner, H.—Die Biochemie des Tabaks, 1936
The Military Surgeon, Vol. 89, No. 1, p. 5, July, 1941

SEND FOR REPRINT of an important article on smoking from "The Military Surgeon," July, 1941. Write Camel Cigarettes, Medical Relations Division, 1 Pershing Square, New York City.

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ASSOCIATION ACTIVITIES

FIRST MEMBER OF ASSOCIATION KILLED IN ACTION

Word has been received of the loss in action of Captain James C. Smith of Ardmore. Doctor Smith was associated with the Hardy Sanitarium and, while living in Ardmore, served as the Secretary of the Carter County Medical Society until entering the military service.

1907-1942

Doctor Smith was a graduate of the Harvard Medical School, and entered the Medical Reserve Corps as a First Lieutenant February 13, 1941. He was subsequently promoted to Captain in March of 1942.

He was killed during a bombing raid on September 9 somewhere in New Guinea. His death is the first among members of the Association serving in the military forces, however, one other member is reported missing in action and is believed to be a prisoner of the Japanese.

FIRST DISTRICT MEETING HELD AT FORT SUPPLY

The annual meeting of the First Councilor District convened on December 3 at Fort Supply with twenty-five physicians in attendance.

Members of the Association and their wives were guests at a dinner given by Dr. John L. Day, Superintendent of the Western Oklahoma Hospital.

Guest speakers for the meeting were Dr. James Stevenson of Tulsa, President-Elect of the Oklahoma State Medical Association, and Dr. Grady F. Mathews, Oklahoma City, State Commissioner of Health.

Dr. O. E. Templin, Alva, Councilor for the First District, presided at the meeting and introduced the guests which included, in addition to the speakers, Captain Katzner and Lieutenant Baine of the U. S. Army Medical Corps.

Following the meeting, there was a business session of the Woodward County Medical Society for the purpose of electing officers. The following physicians were elected and will serve during 1943: President, Dr. C. E. Williams; Vice-President, Dr. D. W. Darwin, and Secretary-Treasurer, Dr. C. W. Tedrowe.

INSIGHT

"Skilled physicians, gifted with peculiar insight into human nature, can often estimate a personality with remarkable accuracy in a few minutes or even seconds, but in general the more a doctor knows of his patient's background the greater advantage he has in handling the case."—Doctor and Patient by Francis W. Peabody, M.D.

ANNUAL A. M. A. CONFERENCE OF SECRETARIES AND EDITORS

Each year the American Medical Association holds a conference at the headquarters of the Association in Chicago to which are invited the Secretaries of State Medical Associations and the Editors of the various State Medical Journals. The 1942 meeting was held on November 20 and 21 with an approximate attendance of two hundred including officers of the various branches of the United States Armed Forces in addition to the officials from state organizations. The program of the Conference dealt wholly with the wartime policies of American Medicine.

The Friday meeting was called to order by Dr. Roger I. Lee, Chairman of the Board of Trustees of the American Medical Association. Dr. H. H. Shoulders, Secretary of the Tennessee State Medical Association and Speaker of the House of Delegates of the A. M. A., was chosen Chairman and presided over all sessions throughout the Conference.

Colonel Fred W. Rankin, President of the American Medical Association, welcomed the guests to the meeting, and in his remarks emphasized the curtailment of large medical meetings but urged that they be replaced by smaller meetings in various sections at properly spaced intervals. He also emphasized the need for the maintenance of the present high standards of medical education regardless of the fact that medical schools are now operating on an accelerated program basis.

The Navy

Admiral Ross T. McIntire, Surgeon General of the United States Navy, explained the place of the Reserve Medical Officer in the wartime setup of the Navy Medical Corps, and further stated that the medical profession should start planning now for the post-war period since the problems arising would be those of specialization. Admiral McIntire remarked that physicians will return to civilian practice with an entirely different viewpoint; and because of their wide experience during service, they will feel they should no longer be compelled to practice only one specialty. The speaker emphasized that organized medicine should start thinking constructively now on the problem of meeting the cost of medical care at the close of the war as Government control would be undesirable.

Procurement and Assignment Service

Dr. Frank H. Lahey, Chairman of the Directing Board of the Procurement and Assignment Service, paid tribute to all those who have in any way cooperated with the work of the Committee. He explained that states having provided more than their quota for 1942 would be given credit for 1943, and that states not reaching their 1942 quota would be required to provide more in 1943. Doctor Lahey stated that, at a recent meeting of the representatives of the various branches of the service, the ratio of physicians to men was set at 6.5 physicians per 1,000 men in the navy and air force, and it was felt the army would probably accept the same figure. It was further pointed out that one physician for each 1,500 civilians was thought to be satisfactory and that recruitment would be based on the same decision. Doctor Lahey mentioned the problem of dislocating physicians and stated that Procurement and Assignment Service was attempting to work out a satisfactory solution.

Dr. Harold M. Diehl of Minneapolis, Minn., a member of the Directing Board, also appeared on the program in behalf of the Procurement and Assignment Service. In his discussion regarding dislocation, Doctor Diehl

stated that a committee to investigate needs should be set up in each state. He said the Central Office would be willing to send State Chairmen lists of interns and physicians physically disqualified for military service who, in turn, might be utilized in needy areas.

The Army

Brigadier General Charles C. Hillman, a representative from the Office of the Surgeon General of the United States Army, spoke on the personnel problem of the Army and explained how the Reserve had been built up since 1918. He explained how the Army had worked with Procurement and Assignment Service in calling doctors into service thereby preventing confusion and disruption. General Hillman further observed that the War Department is working on a plan of keeping an adequate supply of students in the medical schools.

A. M. A. President-Elect

The first speaker on the Friday afternoon session was Dr. James E. Paullin of Atlanta, Ga., President-Elect of the American Medical Association. Doctor Paullin is also a member of the Directing Board of Procurement and Assignment Service. He mentioned the redistribution of physicians and stated that it was his opinion that most of the problems would be considered on a state level inasmuch as it was not possible to solve all problems in the same manner. The President-Elect informed the Conference that 218 doctors in 154 communities in 29 different states had been relocated on a voluntary basis. Doctor Paullin suggested temporary licensure as one possible solution to the problem but further pointed out that each state should be able to work out a satisfactory solution in the time of war.

Public Health Service

Thomas Parran, Surgeon General of the United States Public Health Service, explained that his agency was cooperating with state and local public health agencies. The objectives of National Public Health, according to General Parran, are to aid state departments in replacing personnel in boom areas; to strengthen and develop industrial hygiene to keep up with the changing population; to aid in the control of venereal disease; to operate the malaria control program around industrial sections; and to provide the medical staff of the Office of Civilian Defense base hospitals erected in target areas. It was General Parran's belief that redistribution could be more satisfactorily worked out on a voluntary basis rather than through legislation.

Selective Service

The medical needs of the war and the Selective Service System was discussed by Colonel Leonard G. Rowntree, Chief of the Medical Division of the Selective Service System. He stated the war had made many demands on medicine, and listed four separate branches —military medicine, public health and industrial medicine, research medicine and civil practice. Colonel Rowntree stressed the need for deferment of medical students and other allied problems to meet future needs. The speaker also discussed the problem of rehabilitation and stated that, at present, the best program in this field was being conducted by the State of New Jersey.

The Air Corps

Brigadier General David N. W. Grant of the United States Army Air Force presented the aims of the medical officers in the Air Corps, and stated that every attempt was being made to improve the physician for his return to civilian practice. Because of the far flung fields of operation, a new and very necessary development is global medicine. General Grant stated that every effort was being made by officials to see that flyers returned to their post following hospitalization in better mental as well as physican condition. All hospital staff members have been urged to associate with local medical societies.

Physicians for Civilians

Dr. Creighton Barker, Secretary of the Connecticut State Medical Society, presented the important problem of maintaining an adequate supply of physicians for the civilian population. He stated that the public looked toward medicine for medical care rather than to the Government. Doctor Barker observed that the public should be educated in order that the doctor's time and energy might better be utilized.

War Participation Committee

Dr. Walter F. Donaldson, Pittsburgh, Pa., Chairman of the War Participation Committee of the American Medical Association, discussed the desirability of every state medical association's development of such a committee to coordinate the activities of all agencies engaged in war work. Doctor Donaldson emphasized the fact that it was the duty of those who remained at home to be on the alert in order to protect and safeguard the practice of medicine in the best traditions of the "good old American way."

Annual Editors Dinner

Friday evening a dinner meeting for the Editors of the State Medical Journals was held at the Palmer House. Dr. Stanley B. Weld, Editor of the Connecticut State Medical Journal, presided and, in a brief discussion, presented a number of the problems with which an editor is confronted. Dr. Julian P. Price, Secretary and Editor of the South Carolina Medical Association, discussed the subject "Improving the Methods of Transmitting Information to Physicians." A general discussion of medical magazine problems followed by several of the editors in attendance.

Medical Service Plans

At the Saturday morning session, Mr. A. M. Simons, representing the Bureau of Medical Economics of the American Medical Association, discussed medical service plans of the Farm Security Administration. His detailed explanation presented the difference between the first plans and those now in effect. Mr. Simons stressed the need for a definite understanding of the contract coverage, and further stated that a program would never be inaugurated without the consent of the local county medical society.

The development of the Massachusetts Medical Service Plan was presented by the President, Dr. James C. McCann of Worcester. Discussions followed by representatives from California, New Jersey, Michigan, Pennsylvania and Missouri. Father A. M. Schwitalla of St. Louis, Mo., appeared before those in attendance and emphatically stated that, in his opinion, the time has come for the Board of Trustees of the American Medical Association to work out the experiences of the various medical care plans for the benefit of all State Medical Associations.

Industrial Health

Recent developments in Industrial Health activities as presented by Dr. Carl M. Peterson, Secretary of the Council on Industrial Health of the American Medical Association, was the final presentation to the Conference. The speaker stressed the need for industrial health programs and urged that county medical societies recognize the problem and cooperate with industry in order that the highest level of efficiency of the employees may be maintained.

After extending a vote of thanks to the speakers and the officials of the American Medical Association, the Conference adjourned at one o'clock Saturday.

OKLAHOMA CITY INTERNISTS TO CONDUCT ANNUAL WASHINGTON BIRTHDAY CLINICS

The Fourth Annual Meeting of the Oklahoma City Internists Association will be held at the University Hospital in Oklahoma City on Monday, February 22, 1943.

Clinics will be conducted from 10:00 A. M. until 4:00 P. M. The program to be announced later will include a luncheon and roundtable discussion of all medical problems.

All physicians of Oklahoma are invited to attend.

THE VICTORY TAX AND THE MEDICAL PROFESSION*

Prepared by the Bureau of Legal Medicine and Legislation

The Revenue Act of 1942 imposes a victory tax on individuals amounting to 5 per cent of their victory tax net income. This tax is in addition to all other taxes imposed by the new act, applies to income received after December 31, 1942, and will continue in effect during the present war. The act provides that the victory tax shall not apply with respect to any tax year commencing after "the date of cessation of hostilities in the present war." Physicians of course will be subject to this tax to the same extent as other taxpayers.

The return that a physician must file on or before March 15, 1943, will not reflect the victory tax net income of the taxpayer nor will the victory tax be payable at that time. Since the new tax applies only to income received *after* December 31, 1942, and since the next return includes only income *prior* to January 1, 1943, assuming that the physician is on a calendar year basis for income tax purposes, physicians generally need not be concerned with the payment of the victory tax until their returns are executed, in 1944, for the tax year 1943. There are certain aspects, however, of the victory tax provisions of the new act that will impose requirements on physicians beginning with the first of the year.

Physicians Who Are Employers

If a physician on or after January 1, 1943, employs any person, subject to certain exceptions discussed later on, and pays to such a person a wage in excess of $12 a week, or $624 a year, he must withhold the 5 per cent victory tax from that wage and transmit it to the government at quarterly intervals.

What Constitutes Wages.—Affirmatively, the term "wage" means all remuneration, other than fees paid to a public official, for services performed by an employee for his employer, including the cash value of all remuneration paid in any medium other than cash.

Negatively, the term does not include remuneration paid (1) for services performed as a member of the military or naval forces of the United States, other than pensions and retired pay; (2) for agricultural labor; (3) for domestic service in a private home, local college club or local chapter of a college fraternity or sorority; (4) for casual labor not in the course of the employer's trade or business; (5) for services as an employee of a nonresident alien individual, foreign partnership or foreign corporation, if such individual, partnership or corporation is not engaged in trade or business in the United States; (6) for services as an employee of a foreign government or any wholly owned instrumentality thereof, and (7) for services performed as an employee while outside the United States, unless the major part of the services performed during the calendar year by such employee for his employer are performed within the United States. Persons who perform services in the foregoing seven categories are not exempt from the payment of the victory tax, but their employers are not required to withhold the tax from their wages.

The definition of the term "wage" therefore, is broad enough to include the remuneration paid by a physician to an assistant physician, an office nurse, a stenographer, a secretary, a receptionist and other personnel employed by the physician in connection with his practice.

Withholding Deductions.—Not all of an employee's wage is subject to the victory tax; only that in excess of $624 a year. In computing the 5 per cent victory tax to be withheld, therefore, the employer will disregard the wages paid for each payroll period in accordance with the following schedule:

Payroll period	Withholding Deduction
Weekly	$ 12
Biweekly	24
Semimonthly	26
Monthly	52
Quarterly	156
Semiannually	312
Annually	624

That is, if the payroll period for a particular employee is a week, the tax does not apply to the first $12 paid the employee; if the payroll period is a month, the first $52 escapes the victory tax, and so on. All wages paid in excess of the indicated amounts for each payroll period are subject to the tax and employers must either withhold 5 per cent of that excess or an amount in accordance with tables set forth in the act. These tables indicate optional amounts an employer may withhold instead of the actual 5 per cent of the wage. As an example, for a weekly payroll period, if the wage paid is over $12 and not over $16, 10 cents weekly may be withheld. If the wage is over $20 but not over $24, 50 cents may be withheld and so on for different wage groups for different payroll periods. The use of these tables will simplify greatly the withholding process and physicians should ascertain from the office of the collectors of internal revenue where copies of the table may be obtained.

The law provides that, if a payroll period is less than one week, the excess of the aggregate of the wages paid during each calendar week over the deduction allowed for a weekly payroll period must be used in computing the tax required to be withheld. For example, if an employee is paid on a daily basis at the rate of $5 a day, the employer will not withhold any of the wage paid for the first two days of employment in any calendar week. The wages paid for a third day in the same calendar week will be subject to withholding on $3, the excess of the aggregate of three days' wages, or $15, over the weekly deduction of $12. All subsequent wage payment during the same calendar week will be subject to withholding on the entire amount of each payment. If a payroll period is not covered specifically by the foregoing table, the deduction allowed against each payment of such wages will be the deduction allowable in case of an annual payroll period divided by 365 and multiplied by the number of days in such period, including Sundays and holidays.

In any case in which wages are paid by an employer without regard to any payroll period or other period, the deduction allowable against each payment of such wages will be the deduction allowable in the case of an annual payroll period divided by 365 days and multiplied by the number of days, including Sundays and holidays, which have elapsed since the date of the last payment of such wages by such employer during the calendar year, or the date of commencement of employment with such employer during such year or January 1 of such year, whichever is the later.

In withholding the victory tax, the employer gives no consideration at all to the marital status of the employee or to any dependents that the employee may have, or to any possible deductions to which the employee may be entitled, other than the basic deduction of $12 a week.

Transmission of Withheld Tax to Government.—The employer who has withheld the victory tax from wages paid to employees is required to transmit the withheld tax to the government on or before the last day of the month following the close of each quarter of each calendar year. The first report to be made by an employer to the government, therefore, will be due on or before April 30, 1943. Such an employer must keep such records and render under oath such statements with respect to the tax withheld and collected as may be

*Taken from the Journal of the American Medical Association, Volume 120, No. 14, December 5, 1942, Pages 1143-1145.

Main Office and Entrance to Polyclinic Hospital

EFFICIENCY CONSTANT AIM OF POLYCLINIC

The bbusiness-like office giving entrance to Polyclinic Hospital reflects the high standard of service which this institution sets for itself. The lobby is spacious and cheerful. Thick tile makes for quiet.

Here is the switchboard, constantly and courteously attended, giving telephone service to every room. Back of the desk is the office of the secretary, who handles the business of the hospital. Physicians who practice here appreciate the thorough attention to detail that is an integral part of Polyclinic service.

POLYCLINIC HOSPITAL

THIRTEENTH and ROBINSON OKLAHOMA CITY

MARVIN E. STOUT, M.D.
Owner

required under regulations prescribed by the Commissioner of Internal Revenue with the approval of the Secretary of the Treasury.

Receipts to Employees.—Every employer withholding the victory tax must furnish to each employee, on or before the close of the calendar year, on the day on which the last payment of wages is made, a written statement showing the period covered by the statement, the wages paid by the employer to such employee during such period, and the amount of the tax withheld and collected. Duplicate copies of such statements must be transmitted to the Commissioner of Internal Revenue along with the final report made by the employer for the calendar year.

Physicians Who Are Employees

A physician who is an employee may expect deductions to be made from his wages in accordance with the procedure outlined. The deductions will be made by the employer, subject to the exceptions previously noted, whether that employer is the federal or a state government, a county, a municipality, any agency or instrumentality thereof, a hospital, an industrial or business concern or other person or agency paying wages to a physician. While physicians generally will not be required to pay the victory tax until 1944, and then on income received during 1943, physicians who fall in the category of employees will start paying the tax periodically in 1943 as it is deducted from their wages by their employers.

At the end of the tax year 1943 the victory tax that has been withheld from the wages of a physician employee will be adjusted. This adustment will take place when the return from 1943 is filed the early part of 1944. At that time the victory tax will be redetermined on the return then filed and credit taken from the amounts that have been withheld from wages. Since the amounts so withheld are based on 5 per cent of the *gross* income in excess of $624 a year and since the actual victory tax imposed is 5 per cent of the *victory tax net income*, that is, gross income minus specified deductions in addition to the $624, there will in many instances be an excess in the amount withheld over the tax actually due. In such cases that excess may be deducted from the income tax that will be payable. In all cases, therefore, in which employers have withheld, during 1943, periodic amounts from wages on account of the victory tax, there will be adjustments between the government and the taxpayer at the close of the tax year if such adjustments are necessary.

Postwar Credit or Refund of Victory Tax

As soon as practicable after the date of cessation of hostilities in the present war, the following amounts of victory tax paid for each taxable year beginning after December 31, 1942, will be credited against any income tax or instalment thereof then due from the taxpayer and any balance will be refunded immediately to the taxpayer:

1. In the case of a single person or married person not living with husband or wife, 25 per cent of the victory tax or $500, whichever is the lesser.

2. In the case of the head of a family, 40 per cent of the victory tax or $1,000, whichever is the lesser. In the case of a married person living with husband or wife where separate returns are filed by each spouse, 40 per cent of the victory tax or $500, whichever is the lesser. In the case of a married person living with husband or wife where a separate return is filed by one spouse and no return is filed by the other spouse, or in case of a husband and wife filing a joint return, only one such credit will be allowed and such credit may not exceed 40 per cent of the victory tax or $1,000, whichever is the lesser.

3. For each dependent, excluding as a dependent, in the case of the head of a family, one who would be excluded as a dependent for income tax purposes, 2 per cent or $100, whichever is the lesser.

If for any taxable year the status of the taxpayer, other than a taxpayer whose gross income is $3,000 or under and who uses the simplified return form, with respect to his marital relationship or with respect to his dependents, changes during the taxable year, the amount of the credit or refund of the victory tax for such taxable year will be apportioned, under rules and regulations prescribed by the Commissioner of Internal Revenue with the approval of the Secretary of the Treasury in accordance with the months to and after the change. For the purpose of such apportionment, the fractional part of a month will be disregarded unless it amounts to more than one-half a month, in which case it will be considered as a month.

The law contains provisions under which a taxpayer may, prior to the cessation of hostilities, take advantage of his postwar credit or refund. To the extent of that credit or refund, the taxpayer may reduce the victory tax by deducting amounts paid during the year as premiums on life insurance in force on September 1, 1942, certain reductions of debts and certain investments in obligations of the United States. At the end of 1943 and of each year thereafter in which the victory tax is imposed the taxpayer may, with respect to that tax, do one of two things: (1) He may pay the victory tax in full and wait until the cessation of hostilities to claim his postwar refund or credit, or (2) He may at the time the victory tax is payable reduce the amount of the tax by deducting expenditures for purposes above described in an amount equal to the postwar refund or credit to which he would be entitled after the cessation of hostilities. Assume that Dr. X, an unmarried physician with no dependents, when he executes his return on or before March 15, 1944, finds himself owing a victory tax of $100. Assume, further, that during 1943 Dr. X purchased government bonds, paid premiums on life insurance and reduced indebtedness, expending a total amount of $1,000 for such purposes. Dr. X may pay the $100 victory tax during 1944 and after the cessation of hostilities receive a refund or credit of 25 per cent of the tax, or $25, or he may reduce the victory tax payable in 1944 by claiming credit for the amount expended for the purposes stated but only to the extent of the postwar credit to which he would be entitled, that is, $25. In the one case, Dr. X pays the full victory tax of $100 and gets a refund or credit later; in the other he pays $75 and will not thereafter receive a refund or credit.

No attempt has been made to discuss in detail the intricacies of the victory tax. The object has been rather to present a broad picture with many of the technical details omitted. As previously stated, the tax does not extend to 1942 incomes and physicians generally will not have to compute the amount of the tax they must pay until the returns are filed on or before March 15, 1944. Before that time arrives, it is assumed that proper regulations will be promulgated and be given wide publicity, which will simplify the procedure for the determination of the tax.

Danger in the Cabinet

Two war factors have increased the danger of poisoning from drugs and other preparations frequently found in home medicine cabinets.

One is the thinning out of doctors, which causes people to rely on their own remedies. The other is the possibility of blackouts, which make it harder to find what you are looking for.

Shoe dyes and cleaning chemicals are sometimes taken for throat gargles, and disinfectant tablets are mistaken for aspirin.

As a result, 10 children and 20 adults die each week from accidental poisoning in American homes.

The home medicine cabinet is a time-honored institution, but figuratively speaking, it is filled with high explosive.

GASOLINE RATIONING GOES INTO EFFECT

Gasoline rationing has now been in effect in Oklahoma since December 1, and comparatively few complaints have been received concerning its administration.

The following open letter to the medical profession on gasoline and tire rationing has been released through the Journal of the American Medical Association by Mr. John R. Richards, Chief of the Gasoline Rationing Branch, Office of Price Administration, and should receive the full cooperation of the medical profession:

"In the East Coast Gasoline Rationing program, made necessary by the shortage of transportation facilities for petroleum products, the indispensability of your profession was recognized by its inclusion in the categories of persons eligible for preferred mileage, that is, necessary occupational mileage in excess of 470 miles a month. Now the Office of Price Administration has been ordered by Mr. William Jeffers to institute and administer a nationwide mileage rationing program for the express purpose of conserving our rubber-borne transportation. In framing the Regulations for the new program, your profession was one of the first to be provided for.

"If we are to carry out our double task of preventing a collapse of our military and civilian transportation, we must have the complete cooperation of those groups of persons whose driving is deemed essential to the war effort. Our immediate aim is to attain the 5,000 mile national mileage average set by the Baruch Report as the maximum possible in light of the dire rubber shortage. Our experience with the East Coast program tells us that the preferred categories use one-half of the gasoline consumed, though they constitute less than one-fourth of the total number of automobile operators. Clearly, then, the great savings of rubber on a nationwide scale must be made in the preferred categories.

"Under the Regulations, governing the mileage rationing program, physicians are eligible for preferred mileage if their essential occupational needs exceed 470 miles a month and if the mileage is needed for regularly rendering necessary professional services. Mileage traveled daily or periodically between home or lodging and a fixed place of work is not considered preferred. Physicians who conduct their practices in offices, as many specialists do, are not eligible for preferred mileage.

"Without question or hesitation, doctors have been and will be granted all the gasoline needed to carry out their professional work. We hope that they will regard their concrete symbol of their indispensability, the C book, as a moral obligation and not as a personal privilege. From another point of view, the C book is part of a doctor's equipment; it should not be used for anything but the work of humanity.

"When nationwide gasoline rationing begins, there are certain concrete things a doctor can do to live up to the high ethical standards set for him by his own profession:

"1. At the time of first issuance of rations, he can so carefully compute his necessary mileage as to make a B book adequate for his purposes though he might easily make out a case for a C book, which might be granted to him without question by his local War Price and Rationing Board eager to provide for physicians.

"2. In the computation of his mileage, he can religiously adhere to the provision of the Regulations, which makes 150 miles of his basic ration available for occupational purposes. Moreover, he can help mightily in establishing the principles that only 90 miles of the basic ration are to be used for home necessary use and that there is no provision whatever in any ration for 'pleasure driving.'

"3. Conversely, if he should be granted a C book, he can return to the local board, at the end of the three months period, all unused coupons accruing to him as a result of a quite natural overestimation of needs or of overgenerous 'tailoring' by his board, instead of using such coupons for nonessential purposes. The moral effect of such an act on his fellow citizens will be incalculable.

"4. He can set an example by scrupulously observing the 35 mile speed limit, except in cases of emergency, in spite of the fact that doctors could easily 'get away with it.'

"5. Should he be assigned to a hospital, clinic or institution after a ration card for calling on his private practice has been issued, he can use public means of transportation at the price of personal inconvenience.

"6. He can refrain from any kind of driving whatever which might appear to be nonessential in the eyes of the public.

"Doctors are the leaders and molders of public opinion in their communities. If the average man has any reason to believe that the professional men whom he regards with great respect are indifferent or hostile to the mileage rationing program, it will be difficult, if not impossible, to make it effective. Conversely, if doctors as a group observe the letter and spirit of the Regulations, they will be a powerful force in making this absolutely mandatory war measure serve its purpose. We know that we can rely on the support of your profession, which has demonstrated its patriotism, ability and unselfishness at every opportunity."—John R. Richards, Chief Gasoline Rationing Branch, Office of Price Administration.

Gas Saving Rackets

Physicians who own more than one car are cautioned to be on their guard when approached on propositions concerning the purchase of gasoline saving devices, such as trick spark plugs and carburetor gadgets. Investigation in this field by Better Business Bureaus all over the country have not been satisfactory. Ignition systems can best contribute to motor efficiency and economy by being left to the periodic care of reputable automobile service centers.

PHYSICIANS RECENTLY LICENSED

J. D. Osborn, M.D., Secretary-Treasurer of the Oklahoma State Board of Medical Examiners, reports that licenses to practice medicine and surgery have been granted to 22 applicants during the period from August 15 to December 14, 1942.

The following doctors of medicine were granted licenses:

Aldredge, William Max, Hobart; Black, Thomas Claiborne, Clinton; Bonham, Kenneth Warren, Enid; Dennis, James Lowden, Merced, California; Engleman, Clarence Clarke, Clinton; Fair, Ellis Edwin, Oklahoma City; Felson, Benjamin (Army), Cincinnati, Ohio; Freeman, Chas. Winfred, Rocky; Funk, Robert Edward, Tulsa; Harms, Harold H., Durham, North Carolina; Haynes, Boyd Withers, Jr., Oklahoma City; Kinnaman, Joseph Horace, Ponca City;

MacKercher, Peter A., Ponca City; McQuown, Albert Louis, Des Moines, Iowa; Montgomery, Hazel Irene, Rochester, New York; Packard, Louis Albert, McAlester; Reiff, Maxine Ruth Hoffer, Oklahoma City; Reiff, William Henry, Oklahoma City; Sprinkle, Davis Lee, McAlester; Taylor, Lloyd Wilson, San Francisco, California; Weber, Roxie Adeline, Stillwater, and Weeks, Bertram Allen (Army), Carlisle Barracks, Pennsylvania.

No Widely Accepted Explanation Yet for Seasickness

A review by W. J. McNally, M.D., and E. A. Stuart, M.D., Montreal, Canada, in the current issue of War Medicine, of experimental work on the labyrinth or inner ear in relation to seasickness and other forms of motion sickness fails to bring to light any widely accepted explanation for the cause of the condition or immunity to it. "The labyrinth has been shown by experiment to play an important, probably the most important, part in the causation of motion sickness," the two physicians explain.

NEWS FROM THE COUNTY SOCIETIES

"Rheumatic Health Disease" was the topic of discussion by Dr. Clark H. Hall of Oklahoma City before the Cherokee County Medical Society at its meeting on Monday, November 23, 1942.

The following members of the Cherokee Society have been called to duty with the armed forces: Dr. R. K. McIntosh, Jr., Dr. Harry E. Barnes, Dr. Isadore Dyer and Dr. Andrew Ritan.

The Carter County Medical Society met Tuesday, December 15, at 7:00 P. M., at the Hardy Sanitarium with 15 members in attendance. Mr. John B. Turner, candidate for State Senator, was the guest speaker.

The 1942 officers of the Society were re-elected to serve during 1943; namely, President, Dr. Walter Hardy, Ardmore; Vice-President, Dr. D. E. Cantrell, Sr., Healdton, and Secretary-Treasurer, Dr. H. A. Higgins, Ardmore.

The Society extended sympathy to Dr. Hoyle Carlock in his bereavement of the recent death of his father. Doctor Carlock is serving with the armed forces.

The next meeting of the Society will be January 12 at the Hardy Sanitarium.

Election of officers for 1943 was the order of business for the Blaine County Medical Society meeting at the Watonga Hospital on Thursday, December 10.

The officers elected are as follows: President, Dr. Virginia Olson Curtin, Watonga; Vice-President, Dr. Frank Buchanan, Canton; Secretary-Treasurer, Dr. W. F. Griffin, Watonga, and Delegate to the State Meeting, Dr. Virginia Olson Curtin.

A discussion of next year's program was also held. Dr. L. R. Kirby of Okeene will be the speaker at the next meeting of the Society on Thursday, January 21. The dentists in Blaine County will be invited guests.

Dr. William C. Miller of Guthrie was re-elected President of the Logan County Medical Society at its meeting on December 15 at the Cimarron Valley Wesley Hospital. Ten members were in attendance. Other officers elected were Vice-President, Dr. Charles L. Rogers, Marshall; Secretary-Treasurer, Dr. J. L. LeHew, Jr., Guthrie, and State Delegate, Dr. L. A. Hahn, Guthrie.

One of the subjects of discussion by the Society was that of the Grade A Milk Ordinance. The County Health Unit was discussed and a resolution passed to endorse and continue the same.

Among the projects being worked on by the Society are discussions on timely topics by the members, motion pictures and local health problems.

The annual business meeting and election of officers of the Tulsa County Medical Society was held Monday, December 14, at 8:00 P. M., at the Mayo hotel with 55 members present.

Dr. James C. Peden, President-Elect during the past year, will assume the duties of President. Officers elected to serve with Dr. Peden are as follows: President-Elect, Dr. R. A. McGill; Vice-President, Dr. H. A. Ruprecht, and Dr. E. O. Johnson was re-elected Secretary-Treasurer. Dr. H. B. Stewart was elected as a member of the Board of Trustees to serve until 1947. Dr. L. C. Northrup was elected to replace Dr. R. C. Pigford, now in the service, as a Delegate to the State Meeting. Dr. Hugh Graham was also elected as a Delegate. The other Delegates are holdovers. Dr. J. S. Chalmers of Sand Springs is the new member on the Board of Trustees.

The inauguration of the new President will be January 11 at the Mayo hotel. A motion picture, "Peptic Ulcer," in sound and color will also be presented.

Fifteen members of the Custer County Medical Society attended the dinner meeting held Wednesday, December 9, at 7:00 P. M., at Harry's Cafe in Clinton.

The following officers were elected to lead the Society during the coming year: President, Dr. F. R. Vieregg; Vice-President, Dr. Ross Deputy, and Secretary-Treasurer, Dr. C. J. Alexander. Delegates elected to represent Custer County are Dr. McLain Rogers and Dr. Ellis Lamb with Dr. C. H. McBurney and Dr. C. Doler as respective Alternates. Censors for the Society are Dr. C. H. McBurney, Clinton; Dr. T. A. Boyd, Weatherford, and Dr. E. M. Loyd, Taloga—the latter two having been elected at the recent meeting.

It was voted by the Society to pay the dues of nine members who are now serving in the military service; namely, Drs. A. W. Paulson, L. J. Kennedy, Paul B. Lingenfelter, J. R. Hinshaw, Gordon Williams, J. Guild Wood, H. R. Cushman, William C. Tisdal and Bernard Bullock.

The Society also voted to send a donation to the National Physicians Committee.

Following this order of business, discussion was held concerning the joint meeting of Washita, Beckham and Custer Counties in view of the reduced membership because of the fact that many members are serving with the armed forces. To stimulate closer union of members while so many are away and in view of the difficulties of transportation, the appearance of local men on the program was discussed.

Dr. Clinton Gallaher, Secretary of the Pottawatomie County Medical Society, presided in the absence of the President at the regular meeting of the Society on Saturday, November 21. Dinner was served at 7:00 P. M. in the Haviland Room of the Aldridge Hotel in Shawnee to fourteen members followed by the regular business session.

Nominations for 1943 officers made at the November 7, 1942, meeting were read and no further nominations were offered. The officers are: President, Dr. A. C.

SPRINGER CLINIC

Medicine
D. O. SMITH, M.D.
H. A. RUPRECHT, M.D.
E. G. HYATT, M.D.

Surgery
CARL HOTZ, M.D.

Urology
MALCOLM McKELLAR, M.D.
*K. F. SWANSON, M.D.

Eye, Ear, Nose and Throat
D. L. MISHLER, M.D.
(*Serving in Armed Forces)

Phone 7156
604 South Cincinnati—Tulsa, Oklahoma

Obstetrics
*F. D. SINCLAIR, M.D.

Pediatrics
G. R. RUSSELL, M.D.

Anesthesia
M. R. STEEL, M.D.

McFarling; Vice-President, Dr. Charles W. Haygood, and Dr. Clinton Gallaher was re-elected Secretary-Treasurer. Delegates are Dr. G. S. Baxter and Dr. W. M. Gallaher, and Alternates are Dr. C. C. Young and Dr. E. E. Rice.

By vote, the following committees will serve during the coming year: Executive Committee; Drs. A. C. McFarling, Charles W. Haygood and J. M. Byrum; Board of Censors: Drs. M. A. Baker, A. C. McFarling and W. M. Gallaher; Board of Trustees: Drs. A. C. McFarling, Clinton Gallaher and J. M. Byrum.

Standing Committees for the year 1943 will be appointed by the incoming President, Dr. A. C. McFarling.

Following the election of officers, Dr. C. C. Young reviewed the financial condition of the Bulletin of the Pottawatomie County Medical Society and submitted an annual statement of the auditing. It was voted by the Society to continue the maintenance of the Bulletin publication under the financial advice of the Board of Trustees and business management of Dr. C. C. Young. Dr. E. E. Rice will continue as Editor.

Dr. F. P. Newlin will continue as manager of the Radio Broadcast programs which are sponsored by the Society.

Dr. C. C. Young discussed the activities of the Infantile Paralysis Foundation and called attention to the fact that it was prepared to give aid in any case where needed.

Dr. E. E. Rice, who had charge of the scientific program, spoke on the subject "Treatment of Hyperemesis Gravidorum with Vitamin B_6 (Pyridoxin Hydrochloride)." Discussions followed by Drs. J. M. Byrum, F. P. Newlin, C. C. Young, John Carson and others.

At the December meeting of the Kay County Medical Society at Ponca City on the 17th, Dr. Philip C. Risser of Blackwell was elected President, Dr. G. H. Yeary of Newkirk, Vice-President, and Dr. J. Holland Howe of Ponca City was re-elected Secretary-Treasurer. Delegates chosen are Dr. A. S. Risser, Blackwell, and Dr. Dewey Mathews, Tonkawa, and Alternates are Dr. J. C. Wagner, Ponca City, and Dr. L. H. Becker, Blackwell.

The program for the evening consisted of a moving picture and running discussion entitled "Peptic Ulcer" sponsored by John Wyeth and Brother. The text of discussion was distributed to members of the Society.

The next meeting of the Society will be January 21 at Blackwell.

Dr. W. G. Husband of Hollis was elected President of the Harmon County Medical Society at the Tuesday, December 15, 1942, meeting of the Society.

Dr. R. H. Lynch will serve as Vice-President, and Dr. L. E. Hollis was elected Secretary-Treasurer. Doctor Husband will represent Harmon County as Delegate with Doctor Hollis as Alternate.

Dr. Carroll M. Pounders of Oklahoma City discussed "Rheumatic Fever" and Dr. Elias Margo of Oklahoma City presented a paper entitled "Functional Disorders of the Feet" at the meeting of the Woods County Medical Society on November 23 in Alva at 7:30 P. M. Twelve members were in attendance.

The two above-named physicians were examiners at the Crippled Children's Clinic held at the Legion Hut during the afternoon which was sponsored by the State Commission for Crippled Children and the Alva Rotary Club.

At the business session following the program, officers were elected: President, Dr. C. A. Traverse; Vice-President, Dr. D. B. Ensor, and Secretary-Treasurer, Dr. O. E. Templin. Doctor Ensor will serve as Delegate and Dr. W. F. LaFon as Alternate.

A resolution was passed to admit all medical officers stationed within Woods County as associate members of the County Society without dues.

The next meeting of the Society is scheduled for January 26 at Alva.

"This is the way to feel refreshed"
Drink
Coca-Cola
Delicious and Refreshing
Pause at the familiar red cooler for ice-cold Coca-Cola. Its life, sparkle and delicious taste will give you the real meaning of refreshment.

Dr. F. M. Edwards of Ringling was elected President of the Jefferson County Medical Society at the meeting on Monday, December 14, at Waurika. Elected to serve with Dr. Edwards are Dr. C. M. Maupin, Waurika, Vice-President, and Dr. L. L. Wade, Ryan, Secretary-Treasurer. Dr. W. M. Browning of Waurika was chosen Delegate.

The transfer of Dr. H. Wesley Yeats of Ringling, as a member from Bryan County, was accepted by the Jefferson County Society.

The Tri-County Society consisting of Stephens, Cotton and Jefferson Counties will meet in Waurika on Tuesday evening, February 9.

Dr. J. V. Athey read a paper entitled "Anesthetic Fatalities" and Dr. H. G. Crawford discussed "Peptic Ulcer" before the members of the Washington-Nowata County Medical Society at the meeting of the Society on Wednesday, December 9, at the Washington County Memorial Hospital in Bartlesville.

At the business session, the following officers were elected to serve for 1943: Dr. J. G. Smith, Bartlesville, President; Dr. J. P. Vansant, Dewey, Vice-President; Dr. J. V. Athey, Bartlesville, Secretary-Treasurer; Dr. K. D. Davis, Nowata, Dr. H. C. Weber, Bartlesville, and Dr. L. D. Hudson, Dewey, Delegates, and Dr. S. A. Lang, Nowata, Dr. E. E. Beechwood and Dr. Thomas Wells, both of Bartlesville, Alternates. Censors are Dr. S. P. Roberts, Nowata, and Dr. O. I. Green and Dr. B. F. Staver, both of Bartlesville.

The annual banquet of the Washington-Nowata County Society will be held January 13 at 7:30 P. M.

A film on "Syphilis" was presented at the meeting of the Stephens County Medical Society on Tuesday, November 24, at the Wade hotel in Duncan by Dr. E. A. Gillis, Director of Venereal Diseases, State Health Department, Oklahoma City. Discussion followed by Dr. F. W. Highfill, Stephens County Health officer.

Doctors representing Cotton and Jefferson County Societies were in attendance at the meeting.

Dr. John S. Lawson of Clayton was elected President and Dr. B. M. Huckabay of Antlers will serve as Secretary-Treasurer of the Pushmataha County Society for 1943, as reported by the December 15 meeting. Dr. D. W. Connally of Antlers will represent the Society as Delegate and Dr. E. S. Patterson, also of Antlers, as Alternate.

"Syphilis" was the topic of discussion selected by Dr. Paul T. Powell, Director of the County Health Department, at the meeting of the Pittsburg County Medical Society on November 20 at the Albert Pike Hospital in McAlester.

Election of officers for 1943 was the order of business of the Craig County Medical Society at its regular meeting on Tuesday, December 15, at 7:30 P. M., in Vinita. Six members and four visitors were present.

The following were chosen to serve during the coming year: President, Dr. Felix M. Adams; Vice-President, Dr. Lloyd H. McPike, and Dr. J. M. McMillan was re-elected Secretary-Treasurer. Doctor Adams will represent the County as Delegate to the Annual Meeting of the Association and Doctor McPike as Alternate. The Board of Censors is composed of Doctor McPike, Dr. W. R. Marks and Dr. P. L. Hays. Doctor McMillan, as Secretary, is in charge of the Scientific Program Committee.

Immediately following the election of officers, a film "Peptic Ulcer," sponsored by John Wyeth and Brother, was presented.

Dr. C. E. Williams of Woodward was elected President of the Woodward County Medical Society in a business session immediately following the meeting of the First Councilor District at Fort Supply on December 3. Those chosen to serve with Doctor Williams are Dr. D. W. Darwin as Vice-President, and Dr. C. W. Tedrowe as Secretary-Treasurer.

For the duration, the Society will hold quarterly meetings in March, June, September and December. The next meeting is scheduled for March 11, at 7:00 P. M., in Woodward.

Officers elected to serve the Okmulgee County Medical Society during the coming year are as follows: President, Dr. A. R. Holmes, Henryetta; Vice-President, Dr. H. D. Boswell, Henryetta; Secretary-Treasurer, Dr. J. C. Matheney, Okmulgee; Delegate, Dr. J. G. Edwards, Okmulgee, and Alternate. Dr. G. Y. McKinney, Henryetta. Dr. S. B. Leslie, Okmulgee, was chosen as a new member on the Board of Censors to serve until 1945. Serving with him are Doctor McKinney and Dr. G. A. Kilpatrick, both of Henryetta. The Secretary with a special committee will have charge of the scientific program each month.

A short business meeting of the Payne County Medical Society was held December 1 at the Davis Funeral Home in Cushing immediately following the postgraduate lecture on Internal Medicine by Dr. L. W. Hunt. The Secretary reports that five of the meetings are being held in Stillwater and five in Cushing and that the lectures are very interesting. Regular county medical meetings will be resumed following the close of the course.

Dr. J. T. Colwick, Durant, was elected President of the Bryan County Society at a recent meeting. Other officers chosen are Dr. J. T. Wharton, Vice-President; Dr. W. K. Haynie, Secretary-Treasurer; Dr. John A. Haynie, Delegate, and Dr. A. J. Wells, Alternate. Drs. S. M. Toney of Bennington, J. T. Wharton and O. J. Colwick comprise the Board of Censors of the Society.

"Shock Therapy in Mental Disorders" was the subject chosen for discussion before the Ottawa County Medical Society at Miami on November 19, by Dr. P. L. Hays, a member of the Eastern Oklahoma Hospital staff, Vinita. Eighteen were in attendance at the meeting.

The Miami Baptist Hospital entertained the members of the Ottawa Society at a dinner meeting at 7:00 P. M., December 17. The speaker for the evening was Dr. William Kinney.

Dr. W. Floyd Keller presented a paper entitled "Intravenous Fluids" at the November 24 meeting of the Oklahoma County Medical Association.

A buffet dinner was served at 6:30 P. M. at the Oklahoma Club. Seventy-nine were in attendance.

• OBITUARIES •

Dr. James William Prowell
1873-1942

Dr. James William Prowell of Kansas, Delaware County, Oklahoma, passed away November 27. Dr. Prowell's death was caused by a Cerebral Hemorrhage which struck him as he was attempting to extricate his car from a small ditch.

Dr. Prowell came to Oklahoma in the early part of 1900, and for the last eighteen years practiced at Kansas. At the time of his death, he was County Health Officer for Delaware County. Dr. Prowell was a member of the American Legion, having served in World War I as a Lieutenant in the Medical Corps.

At the time of his death, Dr. Prowell was 69 years of age.

WOMEN'S AUXILIARY NEWS

Mrs. Frank L. Flack, our State President, urges all County Auxiliaries to endeavor to keep their organizations intact, in spite of the fact that many of their members have gone to join their husbands who are serving in the armed forces. She feels it is very important to have these Auxiliaries still organized at the close of the war, and although it may mean curtailing some of the activities, and a doubling up on the work by some of us who are left, it is our duty to keep things going at home until the others return to resume their normal lives again.

Our National President, Mrs. Frank L. Haggard, stresses that we should keep in touch with the doctor's wife whose husband is in the service, and that a note from her own Auxiliary will mean much, even if she is at home.

Mrs. S. J. Bradfield, of Tulsa, is the new Public Relations Chairman, replacing Mrs. Shade Neely, who resigned to join her husband in the service.

There have been several inquiries made about members at large of the Women's Auxiliary to the Oklahoma State Medical Association, and they may become members upon the payment of 50 cents dues to both the State and National Organizations. Any of the wives of members may send their dues to Mrs. H. Lee Farris, 2214 East 25th Place, Tulsa, Oklahoma, our State Treasurer.

Pottawatomie County

Dr. Paul Gallaher is in service in California, and Dr. Horton Hughes is in Louisiana serving his country. Dr. Alley is in service at Camp Wolters, Texas, and Mrs. Alley and the family are with him. Mrs. R. M. Anderson has charge of the Red Cross work in this community, and they have been making bandages.

Cleveland County

The following Cleveland County doctors are in the armed forces:

Dr. F. C. Buffington, is a First Lieutenant stationed at Jefferson Barracks, Mo. He and Mrs. Buffington are living in St. Louis, Mo.

Dr. Phil Haddock, First Lieutenant, is stationed at Camp Claiborne, La., and he and Mrs. Haddock are living in Alexandria, La.

Dr. James O. Hood, has been commissioned a Captain, and is stationed at Fort Devens, Mass. His family is living in Ayers, Mass.

Dr. Ben H. Cooley, Lieutenant Colonel, is stationed at Wm. Beaumont Hospital, El Paso. Mrs. Cooley and their daughters are in Norman.

Dr. Tom Beeler, Captain, is stationed in Mississippi, and Mrs. Beeler is with him.

Dr. C. R. Rayburn, Major, is stationed at Hunter Field, Ga. He and the family are living in Savannah.

Dr. R. J. Reichert, Captain, is stationed at Camp San Luis Obispo, California. Mrs. Reichert remained in Moore, Oklahoma.

Dr. Wm. A. Loy, First Lieutenant, reported August 21 to Fort Sill, and Mrs. Loy accompanied him.

Dr. M. P. Prosser, Captain, is stationed at Camp Gruber, and Mrs. Prosser plans to join him.

Dr. D. G. Willard, Lieutenant Commander, is stationed at the Naval Hospital, San Diego, California. Mrs. Willard and the family are living in San Diego.

Pontotoc County

The Pontotoc County Auxiliary has sponsored a surgical dressing institute for the Red Cross, and so far, there have been nine counties from that disrtict represented at the meetings.

Tulsa County

The Tulsa County Auxiliary met for its regular monthly luncheon on December 3 in the home of Mrs. Fred Y. Cronk, and the hostesses were the Mesdames D. L. Garrett, Paul Grosshart, C. O. Armstrong, Hugh Graham, J. W. Rogers, and W. S. Larrabee. The members brought toys for their annual toy shower for the children in Tulsa Hospitals on Christmas, and they will be distributed by the Philanthropic Committee. The members also donated 24 new garments to the Needlework Guild.

The members of the Tulsa County Auxiliary donated 38 Christmas boxes for the orphaned soldiers stationed at Camp Gruber. These were turned in to the A. W. V. S. Headquarters for delivery to Camp Gruber. This Auxiliary has also furnished a day room at Camp Gruber, and has partially furnished several others.

Mrs. F. D. Sinclair, and sons, Franklin and Johnson, have joined Captain Sinclair at Fort Sam Houston, Texas.

We are happy to report that our State President, Mrs. Frank L. Flack, is able to be active again, and was at the December 3 meeting of the Tulsa Auxiliary. Best wishes to her for a complete recovery.

AWARDS OFFERED FOR SCIENTIFIC PAPERS

Announcements have been received in the Office of the Association that the American Urological Association and the National Society for the Prevention of Blindness are offering awards for outstanding medical papers in their respective fields.

The Urology Award will be for an essay or essays on some specific clinical or laboratory research in Urology The amount of the prize will be based on the merits of the work presented. Competitors shall be limited to residents in urology in recognized hospitals and to urologists who have been in such specific practice for not more than five years.

Essays must be forwarded to the office of the Secretary, Dr. Thomas D. Moore, 899 Madison Avenue, Memphis, Tennessee, by March 1, 1943.

The prize offered by the National Society for the Prevention of Blindness is in the amount of $250.00 and will be awarded to the paper judged to contribute the most to the present knowledge on the diagnosis of early glaucoma.

Papers should be in the office of the National Society, 1790 Broadway, New York City, by September 15, 1943.

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Office of Civilian Defense

I. PROGRESS REPORT OF EMERGENCY MEDICAL SERVICE.

1. The county health and housing committees have been organized in all counties.

2. Emergency Medical Service has been organized in all counties. Emergency Medical Service in some counties is very well organized, and there are other counties where a mere skeleton organization exists. County Medical Societies could aid the County Emergency Medical Chief in further perfecting the local Medical service for any eventualities from any war activities.

3. A central control system has been perfected covering all of the seventy-seven counties in the state.

4. A full-time State Nurse Deputy was appointed October 1. Nursing Councils for War Service have been set up in seventeen counties. A number of other counties are now in the process of perfecting their Nursing Councils for War Service.

5. There are now enrolled in Emergency Medical Service OCD in our state approximately eight hundred Physicians and Surgeons.

6. There are now enrolled in the Eremgency Medical Service approximately one thousand nurses.

II. HOSPITALS.

One hundred and thirty-eight hospitals have been contacted and are now working wholeheartedly with the Emergency Medical Service.

Twelve hospitals are approved for giving courses to Nurses Aides. These twelve hospitals are located in eight different counties. The National Red Cross has approved, or has in the process of being approved two additional counties. A survey of the 138 hospitals discloses that 1,825 beds are available for evacuation casualties in case of an Emergency. One base hospital has been approved by the War Department in the state, and two other base hospitals are being given some consideration. The State Emergency Medical Service has made available four Mobile Emergency Medical Hospital Units. This project was made possible by the Highway Department, State Health Department and the Emergency Medical Service. The Highway Patrol furnishes the trailer and transports same to the point of disaster where the local Emergency Medical Service will take over the manning and operation of the Unit.

III. BLOOD PLASMA.

Ninteen hospitals in the state are manufacturing blood plasma. Most of these hospitals have a limited amount of blood plasma units available to be turned over in case of an emergency to Civilian Defense. The Medical Division of the Regional Eighth Corps Area expects an inventory of the blood plasma manufactured in the State of Oklahoma, therefore, a monthly inventory is made.

IV. AMBULANCE SERVICE.

One thousand and seventeen ambulances located in various counties of the state are enrolled in the Emergency Medical Service for regular ambulance service. Arrangements have been made for emergency cars to be used for ambulance purposes in case of disaster due to the War.

V. DEFENSE FILMS.

The Defense Films shown under the auspices of the local emergency medical service continues to be in demand. The films have been shown in many parts of the state.

If your County Medical Society desires to have these films shown, have your Emergency Medical Chief make written application.

VI. IMMUNIZATION PROGRAM.

The immunization program continues in practically all parts of the state. (This immunization program is sponsored and agreed to by the State Medical Association, State Department of Health and the Emergency Medical Service).

VII. CHILD DAY CARE PROGRAM.

Proper facilities for child day care have been set up, and are in the process of being set up in five different areas.

VIII. MUTUAL AID WATER SERVICE PROGRAM.

To provide the most effective water service during an emergency, a Mutual Aid has been devised which will function under the direction of a State Water Supply Coordinator, who is also the Chief Engineer of the State Health Department in cooperation with the County Civilian Defense Committees. Under this program the state has been divided into five districts, corresponding with the five engineering districts of the Health Department. Each district will be served by the district engineer of the Health Department, and this person together with his assistants, will have access to a complete record of all trained personnel in the local communities, the location and quantity of supplies and equipment within the districts which will be available for use in any emergency involving a water system.

The following are some of the names of bulletins sent to the Emergency Medical Service over the State.

1. Municipal Sanitation Under War Conditions.
2. Emergency Mortuary Services.
3. Protection and Maintenance of Public Water Supplies Under War Conditions.
4. Volunteers in Health Medical Care and Nursing.
5. Gas Consultant.
6. Medical Field Team Equipment.

University of Oklahoma School of Medicine

The Christmas vacation for the School of Medicine will start at 5:00 P.M., December 19, 1942, and classwork will be resumed at 8:00 A.M., December 28, 1942. Final examinations will begin on January 7, and the Faculty Board will hold its annual meeting at 7:30 P.M., January 15, 1943. The enrollment for the second semester will be on January 15 and 16, and the second semester will begin at 8:00 A.M., January 18, 1943. According to the present calendar of the University, Commencement exercises will be held on May 7, 1943.

The University of Oklahoma School of Medicine was well represented at the meeting of the Oklahoma Academy of Science on December 4 and 5, at Stillwater. The following members of the faculty were included on the program:

Dr. Samuel A. Corson, who gave three illustrated lectures: "Comparative Permeability of Living Cells to Cations and Anions;" "A Quantitative Method for Microinjecting Controlled Quantities of Aqueous Solutions into Living Cells;" and "An Optical Torsion Micro-lever for Measuring Cell Permeability."

Dr. Donald B. McMullen gave an illustrated talk on "Recent Developments in the Control of Water Itch."

Dr. Mark R. Everett and Mr. Louis E. Diamond had a joint paper on "Gasometric Studies of Carbohydrate Oxidation by Hydrogen Peroxide."

Dr. Everett, Clifford F. Gastineau (Junior Student), and Miss Fay Sheppard had a joint paper on "The Catalysis of Carbohydrate Oxidation by Iron and Copper Salts."

Vitamin-rich oil, which is also suitable for varnish making, is contained in the tomato seed, according to reports from Brazil.

AMERICAN BOARD OF OBSTETRICS AND GYNECOLOGY EXAMINATIONS TO BE HELD

The next written examination and review of case histories (Part I) for all candidates will be held in various cities of the United States and Canada on Saturday, February 13, 1943, at 2:00 P.M.

Arrangements will be made so far as possible for candidates in military service to take the Part I examination (written paper and submission of case records) at their places of duty, the written examination to be proctored by the Commanding Officer (medical) or some responsible person designated by him. Material for the written examination will be sent to the proctor several weeks in advance of the examination date. Candidates for the February 13, 1943, Part I examination, who are entering military service, or who are now in Service and may be assigned to foreign duty, may submit their case records in advance of the above date, by forwarding the records of the Office of the Board Secretary. All other candidates should present their case records to the examiner at the time and place of taking the written examination.

The Office of the Surgeon General (U. S. Army) has issued instructions that men in Service, eligible for Board examinations, be encouraged to apply and that they may request orders to Detached Duty for the purpose of taking these examinations whenever possible.

All candidates will be required to take both the Part I examination, and the Part II examination (oral-clinical and pathology examination). Candidates who successfully complete the Part I examination proceed automatically to the Part II examination to be held later in the year.

The Part II examination will be held at Pittsburgh, Pennsylvania, from May 19-25, 1943. Notice of the exact time and place of the examinations will be sent all candidates well in advance of the examination date. Candidates in Military or Naval Service are requested to keep the Secretary's Office informed of any change in address.

If a candidate in service finds it impossible to proceed with the examinations of the Board, deferment without time penalty will be granted under a waiver of our published regulations applying to civilian candidates.

Applications are now being received for the 1944 examinations of the Board.

For futher information and application blanks, address Dr. Paul Titus, Secretary, 1015 Highland Building, Pittsburgh (6), Pennsylvania.

The Four Horsemen ride again

WAR HAS ONCE AGAIN loosed the Four Horsemen of the Apocalypse upon the world . . . fire, famine, sword, and pestilence.

In the last war, the most deadly of these was *pestilence*. And today, in Europe and Asia, there is already a wartime rise in Tuberculosis . . . the dread TB that kills more people between 15 and 45 than any other disease.

You can help prevent a wartime rise of TB in our country—by buying Christmas Seals today . . . and using them every day from now to Christmas. *They fight Tuberculosis.*

BUY CHRISTMAS SEALS

The National, State and Local Tuberculosis Associations in the United States.

Blue Cross Reports

Enrollment in Blue Cross Hospital Service Plans has increased a hundredfold in the past few years and now protection has been extended to more than 11,000,000 workers and their dependents.

The voluntary non-profit movement for providing hospital care through the joint action of community hospitals has become and is recognized as a national influence in the provision of health service. The action of the American Hospital Association in permitting use of the seal of the Association superimposed upon a Blue Cross has been a great factor in the growth of the movement. The snowball started by a few hospitals ten years ago has become an avalanche of community action throughout the nation, or to change the metaphor, a powerful genie which serves the American people in removing the uncertainty and dread of hospital bills.

The example of Blue Cross service sponsored and guaranteed by community hospitals has led to two additional developments in the provision of hospital care; namely, the offering of hospitalization benefit policies by numerous private insurance companies, and, more important, the suggestion for a federal system of hospitalization benefits under the Social insurance provisions of the Social Security Act.

It is, perhaps, only natural that commercial insurance companies would feel justified in extending their protection to include hospitalization contracts, because the American people had been made "hospital conscious" by the Blue Cross movement. Probably some six million participants are today enrolled in commercial and industrial plans. A composite picture of all Blue Cross plans in America reveals that the operation costs for 1941 was less than 12 per cent. Since the remainder must go for payment of hospital bills or increased benefits to members, it is obvious that no serious threat exists from commercial companies that, of course, do not operate as non-profit organizations. Then, too, there is usually no conflict with a cash indemnity rebate and the Blue Cross service agreement.

A compulsory system can be avoided by the voluntary hospitals. If the hospitals of America will continue to support their Blue Cross Plans, they can avoid great inconvenience and regimentation which would develop from a system in which most of their revenue will be received through a single agency.

The present satisfactory hospital income should not obscure the actual facts or present trends in the provision of hospital care. Much of the present high occupancy and income of community hospitals is derived directly from war activity. A very large portion of hospital care is now rendered to patients employed by firms whose products are purchased by government agencies, which, in turn, are financed by local, state, and federal taxation. After the war, a momentary demand will be made for more, rather than less, government support of essential services which have been regularly supplied to members of the Armed Forces. A firmly established voluntary, non-government system of distributing hospital care for employed workers and their families will permit the government, at that time, to concentrate upon service to the unemployed, indigent, and other recipients of public assistance.

The tremendous acceptance of Blue Cross Plans has not been solely because of the rates and benefits offered, but mainly because these non-profit corporations, operating as they do, fulfill their functions in such a manner as to preserve individual self-help and freedom and the perpetuation of our voluntary health system.

A man will talk much of his experience, and make the same mistake every day.

News From The State Health Department

Health in Industry

The health of the American worker has become the topic of much writing and conversation during the past year. People in all walks of life are looking with increasing interest toward the problems of health in industry. The United States Bureau of Labor Statistics has estimated that, as of April 1, 1942, approximately nine million workers were engaged in the typical war industries. By the close of 1942, many more will be so employed. Of this number the great percentage will be made up of men in the older age groups, women, and younger workers who have been rejected from military service for physical or mental disability. The responsibility of guiding the employment of these sub-standard workers and of assisting in the reduction and prevention of accidents and illnesses rests with the physician who derives even a small part of his practice from industry, the general practitioner as well as the surgeon.

The pre-employment medical examination must be used as a means of proper placement of workers in jobs for which they are best suited and in which they will be of least danger to themselves, their fellow workmen and to the industry. In all industries, large and small, engaged in vital war production, medical examinations should be instituted without delay where they do not now exist. In order to make such activity worthwhile, it is important that the physician have a working knowledge of the actual operations within the plant and of the real or potential hazards which may exist. This information may be obtained only by visiting the plant and observing all of the operations involved.

Industrial medicine is no longer concerned only with treatment of traumatic injuries and occupational diseases. Prevention of occupational and non-occupational diseases and injuries is of paramount importance at this time. This is absolutely necessary not only because of the employment of sub-standard workers but because there is the problem of fewer available physicians should sickness and accident rates increase. New substances and processes have been introduced into industry, many of which are potentially harmful. Other substances of known toxicity which were replaced by less toxic or non-toxic substances in peace time, must now be used in industry again, due to shortage of materials and priority restrictions. There are many other reasons why medicine must devote a great part of its attention to industry at this time. Local and Governmental agencies are ready and willing to do their part for conservation of manpower.

The Oklahoma State Health Department has an active Industrial Hygiene Service which is available and capable of giving assistance to the physicians of industry. Through plant surveys and studies, and medical and engineering consultation, effective service for the health protection of workers in industrial plants is available. Requests for assistance are given prompt attention.

Classified Advertisements

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MEDICAL PREPAREDNESS

Physicians To Be Dislocated

The following release has been received from the Directing Board of the Procurement and Assignment Service with the request that it be given immediate publicity:

> **"It is of the utmost importance that the Procurement and Assignment Service for Physicians, Dentists and Veterinarians, immediately has the name of any doctor who really is willing to be dislocated for service, either in industry or in over-populated areas, and who has not been declared essential to his present locality. This is necessary if the medical profession is to be able to meet these needs adequately and promptly. We urgently request that any physician over the age of 45 who wishes to participate in the war effort send in his name to the State Chairman for the Procurement and Assignment Service in his State."**

Oklahoma physicians above the age of 45 should give careful consideration to the above request before enrolling with Dr. W. W. Rucks, 210 Plaza Court, Oklahoma City, the Procurement and Assignment Chairman for Oklahoma.

In the past, there have been far too many physicians who, in a spirit of patriotism, have offered their services in any field in which the Procurement and Assignment Service felt they could be utilized; and when they were subsequently called upon, found that circumstances in their local locality had been altered to such an extent that their original desire to serve in a dislocated capacity or non-military governmental agency could no longer be considered without creating a medical shortage in their own community.

With this new appeal from the Procurement and Assignment Service needing immediate response, it is urged that before a physician enrolls his name he first consult with his local Procurement and Assignment Service Committee as to whether he is considered available for dislocation.

While new quotas for 1943 have not been announced, there is little doubt that Oklahoma will have to supply additional physicians for the armed service during the coming year. On September 1, the 1942 quota for Oklahoma stood at 121 per cent, which will mean the 1943 quota will be reduced in proportion to the number now in the service over and above last year's quota.

The announcement from Selective Service concerning the induction of men over the age of 38 will obviously place a greater responsibility for volunteering on the physicians under that age. In all probability, the majority of the age groups up to 38 years of age will be invited to make applications for commissions; however, physicians between the ages of 38 and 45 will not be excluded from securing commissions, if they are available for service from the standpoint of medical care in their local community and can meet the qualifications of the military Medical Corps.

BOOK REVIEWS

"The chief glory of every people arises from its authors."—Dr. Samuel Johnson.

THE TOXEMIAS OF PREGNANCY. William J. Dieckman, M.D., Professor of Obstetrics and Gynecology, the University of Chicago and Chicago Lying-in Hospital and Dispensary. C. V. Mosby Publishers, 521 Pages.

Dr. Dieckmann, in the very first chapter, outlines and discusses the present day classification of the toxemias of pregnancy with a very excellent review of the classification suggested by the American Committee on Maternal Welfare. He stresses the importance of placing all patients in one group or another with a definite dingnosis, even if it is found necessary to reclassify them later. He recognizes two big groups, namely: A. Toxemia where the disease is not peculiar to the particular pregnancy, having existed prior to the present pregnancy and B. Where the toxemia is peculiar to or dependent upon the pregnancy, stating the pre-eclampsia and eclampsia are true complications of pregnancy and occur only in pregnant women.

The incidence of the different types of toxemia are dealt with and he especially does review and discuss the incidence of eclampsia the world over.

Dr. Dieckmann does not feel that, as yet, we have any characteristic pathological lesion that could be interpreted as being specific of eclampsia. He has identified similar lesions in the livers and kidneys, at times, in non-pregnant persons where death was caused by other diseases. His review of the different causes of death in 41 patients with eclampsia is very timely. Circulatory failure was the most frequent cause of the immediate death.

Section II, dealing with normal and abnormal physiology is presented in masterly form. By reading and understanding this portion of the book one's knowledge of the normal physiology is so refreshed that the abnormal physiology is more easily understood. By taking advantage of the author's knowledge of biochemistry, his wide experience of interpreting certain laboratory and chemistry reports the obstetrician can save many dollars for his patients as Dr. Dieckmann elaborates on the laboratory procedures that are valueless as well as those that are of value.

The chapter on recording the blood pressure is well worth while. The different sounds and phases are considered. Normal blood pressures in pregnant and non-pregnant patients are discussed. Special tests that might affect the blood pressure are discussed.

No place in the present available literature could one learn so much in so few pages as he could in the two chapters on the physiology of the kidneys and liver. Dr. Dieckmann's knowledge of their physiology and his evaluation of the functional test are worth any physician's time. His assimilation of data and their evaluation represents years of work and study.

The two chapters on the relation of the endocrine glands to the toxemias are interesting but, as in endocrinology in general, lacks definite experimental evidence and background, as yet, to be supplied. The pituitary and thyroid gland seem to be associated with toxemia more than the other glands.

The section on the physiology of the development of edema in pre-eclampsia and eclampsia gives one a better understanding of why it develops and how to treat it. The signs and symptoms are described in such a way and so thoroughly elaborated upon that all who are interested in obstetrics should read and re-read these chapters. The individual discussion on the various types of toxemias are considered with well prepared case reports. Complications, prognosis and the obstetrical management of these different types are individually considered. In the chapter on pharmacodynamics, the hypnotics, anesthetics and sedatives are discussed thoroughly and individually. Here one can find the present day opinion of these drugs as they should be used or not used in the treatment of the toxemias.

The procedures used and methods of treatment are discussed and presented in detail. One of the most important chapters of the book is Chapter XXVI where it deals with the indication for terminating pregnancy, the methods of choice and precautions to take. This is followed by chapters on the obstetrical treatment of eclampsia and the non-convulsive toxemias.

Maternal and fetal mortality, as well as morbidity, is presented in Section VI. After reading this section one will want to re-read the book, for here is published by an authority on the subject data not only of the deaths caused by the toxemias but pathological changes that take place resulting in partial or complete invalidism.

This book of Dr. Dieckmann's represents years of work and continuous study of this most important subject. All who are interested in obstetrics will be stimulated and more determined than ever before to evaluate and do something about these treacherous signs and symptoms, namely: excessive weight gain, edema, headaches, alleviation of blood pressure and albuminuria as they occur or are found in pregnant women. Let this be the book of the year for the obstetrician or the general practitioner who does obstetrics.—J. M. Parrish, Jr., M.D.

DR. COLWELL'S DAILY LOG FOR PHYSICIANS. A brief, simple, accurate financial record for the physician's desk. Colwell Publishing Company, Champaign, Illinois, 1942. Price $6.00.

Dr. Colwell's Daily Log appointments and accounts has saved many a dollar and many a headache for the busy doctor. It supplies a simple but comprehensive system of bookkeeping which enables the office secretary to accurately record the "days run" as she attends to other routine duties. The convenient arrangement of the book with outlines for every transaction encourages consecutive recording. In this way, the hazards of memory and recollection are safely negotiated.

The summary sheet appearing at the end of each calendar month keeps the secretary and the doctor informed, offers a ready comparison with previous months and with the same month in previous years, and, what is more important, it supplies ample data for the compilation of income tax reports.

For the benefit of those who are not familiar with this record book, may we add that it provides an obstetrical waiting list, narcotic records, social security, deaths and notifiable diseases.

If you are worried about your haphazard handling of the above items, you may want to consider Dr. Colwell's Daily Log.—Lewis J. Moorman, M.D.

WHEN DOCTORS ARE RATIONED. Dwight Anderson and Margaret Bayloux. Pp. 253. 12 chapters. Coward-McCann, Inc., 2 West 45th Street, New York City. Price $2.00.

This volume is intended primarily to assist those millions who, because of the needs of the United States Armed Forces and the interests of the public, have temporarily, at least, lost their family physicians. One of the co-authors is Director of Public Relations, Medical Society of the State of New York, and an introduction is by Dr. Nathan B. Van Etten, who recently served with distinction as President of the American Medical Association.

It therefore follows that the subjects discussed and the advice offered has been done in an orthodox manner. All activities and institutions which are related in any way to the art of medical practice are given due consideration. These include clinics, hospitals, standardized and otherwise, drug stores, prescribing druggists, self-treatment, specialists, quacks and the irregulars.

If the prospective patient follows the advice given by the authors, the procedure usually followed in the selection of a new doctor will, to say the least, be considerably extended. A friendly neighbor or an acquaintance may, as in the past, be asked to recommend a physician, but he will also be asked whether the physician belongs to his county medical society and takes postgraduate courses. If satisfactory information is not obtained in this manner, the prospective patient is told that good public libraries usually contain medical directories which contain up-to-date information on every legally licensed doctor in the country; also, directories of the various specialists. A differentiation is made between a qualified specialist and one who, without such qualifications, has set himself up as such.

The "Bedside Manner" of a strange doctor often wins or losses a client with the first contact, and there are not a few otherwise well qualified physicians who, because of a lack of that "something," cannot win the confidence of the patient. Many of our younger doctors receive their clinical training in charity wards of general public hospitals where the necessity for a tactful approach to the patient is not given serious consideration largely because the patient does not have the privilege of making a choice. Chapter XIII of this book should serve to correct this lack of very necessary training if and when the building of a private practice is under consideration.

The authors have also lectured the prospective patient on "How to Be a Good Patient" to the end that the most satisfactory results possible may be obtained under existing circumstances.

Finally, a warning is sounded as to the future of medical practice. That an attempt will be made to continue rationing of doctors after the war is an almost forgone conclusion. Even before the war and for several years this move has been under way—largely from influences originating outside the profession.

Apropos of this warning, the volume is brought to a close with this paragraph: "One of the most important decisions which the people have to make, or have made for them, when the war is over, is whether they will have the doctor of their choice, one toward whom the feeling of confidence is most likely to flow, or a doctor rationed to them, whom they must accept whether they like him or not, or go without medical care."

A wide-spread reading of this volume by the public could not result otherwise than good in helping to continue the march of medical advance in our beloved country after the war is over.—Horace Reed, M.D.

Warn Against the Use of Sulfathiazole For Infections Within the Skull

Their findings in experimental investigations of the use of the sulfonamide drugs for intracranial infections constitute "a clear warning against the intracranial use of sulfathiazole," Cobb Pilcher, M.D., Ralph Angelucci, M.D., and William F. Meacham, M.D., Nashville, Tenn., report in the July 18 issue of The Journal of the American Medical Association.

The development of convulsions in a very high percentage of their investigations following the implantation of sulfathiazole, the three physicians say, "prompts this preliminary report, as a warning against the clinical use of this drug in this manner. . . . Sulfanilamide and sulfadiazine do not appear to have the same irritating effects on the cerebral cortex, but until microscopic studies are completed no conclusion can be drawn in this regard."

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MEDICAL ABSTRACTS

"TRANSPLANTS TO THE THUMB TO RESTORE FUNCTION OF OPPOSITION: END RESULTS." C. E. Irwin, M.D. Southern Medical Journal. Vol. XXXV, P. 257, March, 1942.

Lack of opposition power in the thumb is a serious handicap to the usefulness of the hand. The grasping ability of the hand is decreased to the extent that its function is hardly more than a hook, and the finer movements of the hand are lost. The various movements of the thumb are discussed. Following an attack of infantile paralysis, many of these movements may be lost. A basic transplant to restore the usefulness of the thumb includes the following features:

1. The course of the transplanted tendon from the muscle belly to the pulley must be in a straight line.
2. The pulley must be so constructed that its original position will remain constant.
3. The pulley must be so constructed that it will allow free gliding movement of the tendon.
4. The tendon must lie in front of or toward the flexor side of the metacarpophalangeal joint as it passes to its insertion in the base of the proximal phalanx.
5. The tendon is fastened directly to the bone, entering the proximal phalanx of the thumb on the border adjacent to the web.

The details of the mechanical advantages of this transplant are described. The flexor sublimis tendon to the fourth finger is passed through a tendinous pulley, formed at the pisisform bone by a part of the flexor carpi ulnaris, is extended subcutaneously, and is attached to a tunnel in the second phalanx of the thumb. Contraindications and postoperative treatment are discussed. The results obtained were good, twelve; fair, four; and poor, three.—E. D. M., M.D.

"CALCIFICATION AND OSSIFICATION OF VERTEBRAL LIGAMENTS (SPONDYLITIS OSSIFICANS LIGAMENTOSA); ROENTGEN STUDY OF PATHOGENESIS AND CLINICAL SIGNIFICANCE." Albert Oppenheimer, M.D. Radiology, Vol. XXXVIII, P. 160, Feb., 1942.

The pathogenesis of this condition is disputable. The longitudinal ligaments are often calcified or ossified in the presence of vertebral infections, such as, tuberculosis typhoid, staphylococci osteitis, syphilis, and malta fever; after trauma; and less commonly, around malignant metastases. It may be present in juvenile and in senile kyphosis.

Bone hypertrophy always follows rarefaction. When vertebrae adjacent to a thinned disc are constantly injured mechanically, because of the loss of thickness and elasticity of their natural buffer, traumatic rarefaction results—a reaction corresponding to callus formation. A triangular area between the anterior vertebral edge, the attachment of the longitudinal ligament to the body above this edge, and to the disc below, presents a vertebral surface devoid of ligamentary covering. It is in this space that vertebral osteophytes form. Instead of playing an active part in the formation of osteophytes, the vertebral ligaments mold them and set a limit to their growth.

The longitudinal ligaments may be calcified or ossified in the absence of other vertebral lesions. This tends to occur where the ligament is relaxed, as opposite a reduced intervertebral space or on the concave side of a kyphosis or scoliosis. Calcification and ossification of vertebral ligaments are not typical of any disease, and should not be confused with arthritis. In their presence, vertebral mobility is normal, unless there is also present disease of the apophyseal joints or vertebral bodies. Complete spinal rigidity has been observed in Marie-Strumpell disease, in the entire absence of calcification or ossification of ligaments. This condition does not cause pain. It is not a pathological or a clinical entity, but a secondary reaction, often indicating the coexistence of a lesion or the vertebral bones or joints.—E. D. M., M.D.

"THE GEOGRAPHIC PATHOLOGY OF ST. LOUIS ENCEPHALITIS." Albert E. Casey, M.D., Birmingham, Alabama. Southern Medical Journal, Vol. 35, No. 10, October, 1942.

In this report, it seems that the author has contributed information resulting from a study of the graphic distribution of encephalitis of a distinct type which occurred in St. Louis and St. Louis County in 1933 and 1937, which may be exceptionally important.

It was found to be significantly distributed along the small streams in St. Louis and St. Louis County, all of which carried sewerage, and in areas characterized by weeds and garbage dumps; and it was significantly scarce in both epidemics in those areas not characterized by weeds, open sewage and ponds. Using an adequate control series and biometrical methods, no foci were found along the most traveled highways in St. Louis County, along the principal boulevards in St. Louis, along the interstate railroads, and there was no relation of the disease to congested housing. There was no evidence that in 1937 the population in the heart of the city where the disease was significantly scarce contained more immune persons than were to be found in the areas of greatest concentration of the disease. In fact, there was a possible significant preponderance of immune persons in the areas of greatest concentration (the disease occurred in the same districts in 1933). The distribution of the disease was different from that of measles. The possibility of a mosquito vector was considered.

The discussion of this report was also enlightening. Dr. Goronwy Owen Broun of St. Louis, an authority, had the following to say:

"The status of mosquito transmission of this disease at the present time is as follows: The distribution of the case of St. Louis encephalitis as Dr. Casey has pointed out, is such as you would expect from an insect-borne disease where the insect lives along streams. That would be in favor of the mosquito as vector.

"It would be necessary, of course, to show that mosquitoes biting an infected animal could acquire the virus. That has been done in the case St. Louis encephalitis, by Webster, in the case of the Anopheles mosquito, and in our own laboratory we have shown that the Culex pipiens, which is the most common mosquito in this neighborhood, is able to harbor the virus after biting an infected animal.

"Thirdly, it should be possible to find infected mosquitoes in an epidemic neighborhood. That has been done, as Dr. Smith has pointed out, with mosquitoes captured in the state of Washington during an epidemic, a variety of Culex, Culex tarsalis, being found spontaneously infected with virus.

"Locally here we have captured mosquitoes in the last several years, but I would like to point out that this was in the period between the epidemic outbreaks.

So far, in this area, we have not found any infected mosquitoes.

"There is a final point still needed to prove the possibility of mosquito transmission of St. Louis encephalitis. So far it has not been demonstrated that once a mosquito acquires the virus and bites a second animal, that the animal will become infected with encephalitis. Webster attempted to do this with infected Anopheles mosquitoes, and we have done similar experiments with infected Culex. The animals bitten by the mosquitoes did not become ill with encephalitis.

"It is, of course, known that the virus, when injected under the skin of mice does not cause encephalitis. If injected into a nerve or introduced into the nasal passage so that it comes in contact with the olfactory nerve, then the animal becomes infected. The proof of transmission by the bite of infected mosquitoes is therefore still missing in evidence needed to prove mosquito transmission.

"Recent work has shown that in the case of lymphocytic meningitis, the temperature to which the mosquito is subjected prior to biting an animal is important, and this may be a factor in the transmission of St. Louis encephalitis.

"Still another method of transmission deserves some mention, namely, entry of the virus through the gastro-intestinal tract. That the intestinal tract is a possible portal of entry for the infection is shown by the observations of Harford, Sulkin and Bronfenbrenner. These investigators have shown that an adult mouse after devouring infected young, may become infected with encephalitis.

"Dr. Mezera working in our laboratory introduced the virus directly into the gastro-intestinal tract by injection after laparotomy. In only one instance among fifty did the virus so introduced into the intestine result in production of encephalitis."—H. J., M.D.

"THE INHERITANCE OF DIABETES INSIPIDUS." Harry Blotner, M.D., Associate in Medicine, Peter Bent Brigham Hospital, Boston, Mass. American Journal of the Medical Sciences, August, 1942, Vol. 204, No. 2, Pages 261-265.

"The term diabetes insipidus means a marked polyuria and polydipsia which usually ranges from at least six to ten liters a day and is relieved by pituitrin. The polyuria and polydipsia are even present during the night, when the patient is in bed."

The functional pathology attending the mal-functioning of the pituitary glands and its anatomic environs, have been known in its relation to Diabetes Insipidus for a long time. Tumors of the hypohysis and regional anatomy, fractures, infections, and many etiological factors have been attributed to its development. The most common cause is Idiopathic, where neither x-ray biochemistry or meticulous history taking has given a clue as to its onset. The experience of its being a familial disease has been studied by several continental clinicians. The most notable being Adolph Weil, 1884, when he studied four generations of a family of 91 members, headed by a man with Diabetes Insipidus and found that 24 of these had the disease. His son followed up and found in five generations of this family that there were 35 cases among 225 members. Another case studied by Chester and Spiegel with both maternal and paternal ancestry history affected, had one child by one marriage, and one child by another marriage so affected.

The author has followed a case for five years in which the mother and grandmother had the disease. Since there is so little in American literature about its family proclivities that he has meticulously reported this case and reviewed the literature on this subject. Among the 70 cases of this trouble in the records of Peter Bent Brigham Hospital, this seemed to have been the only one. The author concludes, however, that when this disease is inherited it may be found rather frequently in such a family. He claims the disease may appear shortly after birth or in later life. He says there is a rather general impression that the familial Diabetes Insipidus is due to a dominant gene and transmitted through many generations of a family through maternal and paternal side to either female or male.—L. A. R.

"UNUSUALLY HIGH INSULIN REQUIREMENTS IN DIABETES MELLITUS." William I. Glass, M.D.; Clifford L. Spingarn, M.D.; and Herbert Pollack, M.D., New York. Archives of Internal Medicine, Vol. 70, No. 2, August, 1942. Pages 221-235.

No two cases of diabetes mellitus are treated alike. They vary from day to day during the course of the disease and its complications. The Dextrose-Insulin ratio is changed by so many fundamental factors. Bizarre conditions are frequently met with when enormous doses in insulin resistent cases present themselves. The author divides the insulin resistent cases into two groups: one, those connected with some complication, as diabetic ketosis, infection, endocrine disorder, and hepatic disease. Two, a large group probably called idiopathic, where clinical and post-mortem findings do not identify the etiology.

The case the author reports is one which was observed for six months, giving 85,000 units of insulin with some days reaching 2,300, 2,500, 2,700, to relieve the ketosis. The cases ultimately managed on five units a day. This case emphasizes the statement of Martin "that there is not necessarily any upper limit to the number of units of insulin that may be given."

His guide for the administration of insulin was the presence of acetone and dextrose in the urine and the general condition of the patient. The persistent acetonuria caused an effective level to be reached, only on giving 200 units hourly for ten hours. He was prepared to raise the dose to a higher level if need be. He says "this experience supports the concept of Taussig that in case of insulin insensitivity, the law of mass action of inorganic chemistry is valid with respect to the action of insulin."

He changed diets, insulin, gave intravenous phosphates, various endocrine substances, low potassium diet, desensitization, procedures to depress the actviity of the anterior lobe, by roentgen ray of pituitary area. It is known that the anterior pituitary and pancreas are antogonists and that excessive antutiary secretion weakens the pancreatic hormones so x-ray therapy was centered on the silla turcica, but if results were obtained that was only three months treatment. Diabetes in dogs can be produced by long injection of anterior pituitary substances. Lipocaic, a fat free extract of pancreas is effective in maintaining depancreatized dogs alive, but it was not sure that was effective in this case, although given. It was felt by the author that there was only slight hepatic dysfunction.

A transient bacillary diarrhoea was noted to upset the ketogenic anti-ketogenic balance temporarily. Tests for hepatic efficiency were done and not found abnormal, even though hepatomegaly was present, and even slight icterus at one time.

The insulin resistance gradually diminished so that after a six months period, management was carried on with only five units of insulin a day on a prescribed diet.

This case is quite educational because the outcome would have been very different had not treatment with heroic doses of insulin, under proper guidance, been instituted. This also emphasizes the fact that insulin insensibility may be only of short duration and the one in charge should be alert to the daily changes.—L. A. R.

"PITRESSIN TANNATE IN OIL IN THE TREATMENT OF DIABETES INSIPIDUS." Harry Blotner, M.D., Boston, Mass. Journal A. M. A., Vol. 119, No. 13, July 25, 1942.

The treatment of diabetes insipidus has gone through many stages of evolution since it was found to have its etiology in the base of the brain, and the harmone of the posterior pituitary body was isolated. He first used obstetrical and surgical pituitrin by hypodermic

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injection, and then found that by insufflating it, it had even a better effect, since some thought it was absorbed closer to the hypophysis. Then the pituitary powder was commercially available and its insufflation was effective and more economic. Insufflation was only a fair weather treatment that was not dependable when a cold or allergy prevented its absorption. Now since pituitary glandular substances has so many harmones, it was found that the posterior pituitary contained a pressor substance which is precipitated by tannic acid. This was filtered out, dried, and dissolved in peanut oil. This pressor substance, Pitressin Tannate in Oil, does not have the oxytoxic effect, nor does it produce the intestinal cramp, diarrhoea, headaches, palpitation or pallor. The effects of the water soluble or powdered form is very short, lasting only a few hours, and later may produce sore arms. The sudden absorption was the cause of the unpleasant effects, so it was found the slow absorption in peanut oil added decidedly to the efficiency and length of the therapeutic effect, as insulin combined with protamine and zinc, by its slow absorption, has added good qualities to the therapy of diabetes mellitus.

The Pitressin Tannate in Oil in one c. c. ampoules will cause a diminution in urinary output in a few hours, and the following day the amount will be diminished. The daily injection of this ampoule seems to have a cumulative effect, so that after a few days one ampoule will control the polyuria and polydipsia for as much as 48 to 60 hours in eight cases he studied. (The reviewer has noticed that emotional factors produced a lessened efficiency and required a larger dosage of this drug, as it correspondingly does in protamine zinc insulin.)

The urinary output in adequate dosage would lessen the thirst and bring down the output to the physiological amount, but would not reduce it below that point unless heroic dosages were given. The author found in the case of the brain tumor, that the polydipsia and polyurias refractory to the solution of posterior pituitary, but the use of Pitressin Tannate in Oil reduced to an intake of 3200 to 2400 c. c. The output was 1100 to 1195 c. c.

The author has given the clinical histories and charts showing the relative effects of Pitressin Tannate in Oil with no treatment on the daily output of a patient with diabetes insipidus. Various blood tests were done and one c.c. of the drug was always given. The specific gravity of the urine would raise from 1000-1010, to 1024-1036. The weight of the patient did not seem to have been affected. The author said it was interesting to note the increased saliva and improved appetite and digestion. The dryness of the mouth disappeared more definitely with Tannate than plain water soluble post-pituitary therapy. (The reviewer noticed one case of a pregnancy in diabetes insipidus was relieved of her vomiting and the bad effects of pregnancy when started on this therapy, only to return when the effect of her medicine wore off.) This treatment has certainly been a boon to those so afflicted, as they would be unable to sleep but a short time at night, or go out in society or places of amusement, because of the frequency or urination and in such large amounts. The secondary effects was the dilatation of the portions of the urinary tract. The life expectancy was not affected, as these cases frequently live to a ripe old age, going through pregnancies as otherwise normal individuals.—L. A. R.

"IRON IN NUTRITION (REQUIREMENTS FOR IRON)." Clark W. Heath, M.D. Journal of A. M. A., October 3, 1942. Pages 366-369.

"There is no more useful field in nutritional research at the present time than the exploration of the adequacy and inadequacy of different foods and enriched foods in supplying substances necessary to the health of man."

Iron he calls a one way substance, i. e., it is not lost to the body economy by the normal kidney, bowel, or other emunctories. The iron lost to the blood by excessive absorption is stored up in the liver, kidneys, spleen, and other organs as a depository for future use if needs be.

The matter of growth, pregnancy, menstruation, lactation and other physiologic functions may call on added intake to replace the drainage from these depositories. The study of patients having hypochromic anaemia which is alleviated by iron medication shows that serious blood loss can usually be demonstrated. Even when on a very poor diet with inadequate iron and mal-absorption by a disordered gastrointestinal tract, the real cause will be found to be in blood loss. Even then when a patient has achylorhydria or gastrointestinal disturbances, interferring with adequate iron in a diet, the anaemia will respond to inorganic iron in large doses. "The child at birth has a certain amount of stored iron which is available for use. In prematurity and twin births, this may be considerably limited and these infants are later vulnerable to iron deficiency."

The amount of iron absorbed into the body is quite large. One experiment of the absorption of 6 gms. of iron, was more than is assumed to be present in the normal body. The increased storing of iron gets pathologic in haemachromatosis where over 50 gms. may be recovered from the tissues. Hence there must be a delicate mechanism which controls the normal amount of iron in the tissues. In dogs and man, iron absorbed is retained in greater amounts when needed for blood regeneration. Iron is absorbed in the upper intestine. (The reticulocyte response to large iron dosage following blood loss, is like that in primary anaemia following liver therapy.)

The need of iron varies in different ages and under different conditions. Chlorosis has disappeared because of the outdoor activities and heliotherapy of our modern girls. Iron requirements are greatest in infancy, early childhood, and puberty, being larger in females than males, and increased during pregnancy. Consequently, when physiologic needs are not supplied, iron deficiency anaemia will occur.

Sixteen per cent of the female patients entering Boston City Hospital medical wards have iron deficiency. If stores of iron are deficient, then these stores must be replenished by dieting and iron. The synergistic effect of copper, cobolt and manganese is still subjudice, because of the proportion of these elements in the usual iron derivatives.

The problem regarding iron in enriching flour has to do with the choice of iron preparation, the ease and efficiency of mixing palatibility and availability, together with the possible detriment on other constituents. It is fairly certain that iron as a simple salt added to flour will be more available than the iron in close organic combination in original flour. "There has also been shown a relationship betwen the utilization of iron and the amounts of phosphorus and calcium in the diet." On the other hand, there is no definite indication that harm would result from the addition of small amounts of iron salts to flour.

"At the present time, it would appear that if whole grain flours were widely used and the advantages of widely chosen and adequate diet were promulgated, nutritional requirements for iron and other minerals would be adequately supplied."—L. A. R.

"EPIDEMIC KERATOCONJUNCITIVITIS (SUPERFICIAL PUNCTATE KERATITIS, KERATITIS SUBEPITHELIALIS, KERATITIS MACULOSA, KERATITIS NUMMULARIS) WITH A REVIEW OF THE LITERATURE AND A REPORT OF 125 CASES." M. J. Hogan and J. W. Crawford. American Journal of Ophthalmology, Vol. 25, Pp. 1059-1078. September, 1942.

The acute inflammatory eye disease appeared in the region of San Francisco in September, 1941, and spread rapidly among the shipworkers in a form of epidemic. It has been called by various names. The term of epidemic keratoconjunctivitis is a good descriptive term since the affection is characterized by edema of the

lids and conjunctiva, followed by intense hyperemia, but with very little discharge, keratitic spots developing in from five to eight days just beneath Bowman's membrane.

The disease is now being seen in various parts of the United States. The authors have recognized and treated a good many cases, and base their present report upon 125 observations. It is not a new disease, since, in 1889, Stellwag described it as a peculiar form of keratitis. Since that time, many other ophthalmologists have studied it and observed it all over the world. Only recently a widespread epidemic has been reported in Germany and Southern Europe. In the United States the first epidemic occurred in 1938 in San Fernando, California. In 1941, Holmes recorded about 10,000 cases in an epidemic that occurred on the island of Oahu, Hawaii, from where the disease was probably imported to San Francisco.

Epidemic keratoconjunctivitis has been described in so many different pictures that it seems there are many possible variations in the disease. The conjunctival symptoms may be mild followed by severe keratitis, or they may be mild followed by a mild keratitis. The corneal signs are also subject to considerable variation; some lesions can be seen only with the slitlamp, while others are disciform in appearance.

In the epidemic observed by the present authors, the course of the disease was as follows. Acute conjunctivitis was the first symptom. The patients complained of a "sandy" sensation as if a foreign body were present. In some patients there was intense itching. Within a few hours, glassy edema of the caruncle and semilunar fold appeared and spread to the lower cul-de-sac and bulbar conjunctiva. At this stage there was a little hyperemia. Within 24 hours slight edema of the lids and skin with pseudoptosis became evident. Within from 36 to 48 hours the swollen conjunctiva became congested and red and there was some lacrimatoin. The bulbar conjunctiva was elevated somewhat at the limbus. Most characteristic at this stage was the intense hyperemia and swelling without discharge. In about three-fourths of the patients the regional lymph nodes were enlarged (preauricular, angular, submandibular, and cervical).

In the more severe forms so much edema was present that the conjunctiva was sometimes ballooned out through the palpebral fissure. In this form, severe keratitis nearly always followed. The conjunctivitis was follicular in several patients. A few of them developed bilateral conjunctivitis, either simultaneously in both eyes, or the second eye became affected four or five days later. In some instances, the conjunctivitis was accompanied by conjunctical hemorrhages. Several patients developed extensive, white, fairly thick pseudomembranes covering the palpebral conjunctiva, caruncle and fold. Other patients had transient, milky pseudomembranes on the tarsal conjunctiva of the lids, especially on that of the lower lid. The average duration of the conjunctivitis was 13 days.

Keratitis occurred in about 80 per cent of the patients. It began between the second and eighth days after the onset of the conjunctivitis. Deep lesions of the substantia propria were found in a few patients of whom a smaller number had also iritis with small creamy, round, sharply defined keratitic precipitates, an aqueous flare, and cells. The early corneal changes were tiny punctate infiltrates of the epithelial-erosion type; they healed as the conjunctivitis regressed, and could be stained with fluoresceine. On about the eighth day, typical macular infiltrates could be observed; first, a general haze was noticed; very soon dotlike opacities appeared, which soon coalesced, forming larged foci. The well-developed lesions were 0.5 to 1.5 mm. in diameter, round or oval, sometimes angular, and varied in number from 10 to 100 or more. They were located chiefly in the superficial substantia propria. Characteristic was a lack of ulceration and of vascularization of these lesions.

The corneal infiltrates outlasted the acute conjunctival symptoms by a considerable period. In most cases the lesions became faint within three months. A few patients showed, however, dense corneal maculas and diminution of visual acuity to 20/40 at the end of four months. The prognosis for ultimate vision was good in most of the cases, and even in the most severe cases 20/30 vision was usually attained at the end of three months.

It is probable that the disease is endemic in the Far East where the largest epidemics have been reported. It is believed that the disease is not highly contagious. The disease in the San Francisco epidemic spread by close contact, with direct transfer of the infectious agent. Individual susceptibility played a great part in the transfer of the disease. The organism probably survives only a short period when out of contact with the human body. Close contact, unhygienic surroundings, and a susceptible population probably played a part in the recent American edipemic. Preventive measures have so far been ineffective. It is suggested that patients contracting the disease be isolated from their fellow workers for a period of at least 15 days, or until the conjunctivitis is nearly well.

The cause of the disease is not yet determined. Herpetic virus, other viruses, bacteria, neuropathic, allergic, and nutritional causes have been mentioned. For many reasons it seems probable that the disease is caused by virus. The occupation itself seems to have no bearing on onset of the disease, as there were many instances in which housewives, druggists, dentists, bankers, and business men, as well as the industrial group, were affected. All patients were in excellent general health and in a good nutritional status.

The diagnosis can be made early from the sudden onset, early petechial hemorrhages, absence of discharge, enlargement of regional lymp nodes, absence of bacteria, and presence of lymphocytes in conjunctival smears instead of polynuclear leukocytes.

Therapy is of little avail except possibly in the early stages and in milder cases. The disease is self-limited. For mild cases iced compresses, one percent atropine drops, two percent quinine bisulfate ointment massaged into the eye, roentgen therapy and five per cent sulfonamide ointment may give some relief.—M. D. H., M.D.

"THE CHANGING CONCEPTION OF THE MANAGEMENT OF CHRONIC PROGRESSIVE DEAFNESS." F. T. Hill. The Annals of Otology, Rhinology and Laryngology, Vol. 51, Pp. 653-661. September, 1942.

Twenty-five years ago the treatment of so-called catarrhal deafness was usually some form of inflation, based on the theory of negative pressure as the etiological factor. Tonsils and adenoids were removed and certain intranasal operations performed but largely with the idea of overcoming tubal obstruction. Then came the era of focal infections and the possibility of toxic absorption causing deafness began to displace the negative pressure theory. This time was characterized by eradication of supposed infective foci, which method, though satisfactory in some cases, proved to be rather a disappointing effort. Roentgen therapy of deafness aroused some interest around 1920, soon to be followed by theories of endocrine imbalance and nutritional deficiencies as possible causes of deafness. Meanwhile the treatment for otosclerosis consisted largely of advising patients as to readjustment to future deafness.

For many years surgical efforts to circumvent obstruction to sound waves reaching the internal ear have interested otologists. In and around 1870, division of the posterior fold of the drum membrane and tenotomy of the tensor tympani were practiced by otologists. Various other operations have been suggested since then until 1910 when Barany made a fistula into the posterior semicircular canal and found that there was a slight transient improvement in hearing. Jenkins Holmgren, Sourdille, Lempert, and Campbell perfected this fistulization operation so well that now hearing improvement is more stationary, yet no one can claim that the progress of otosclerosis is completely checked.

All of these procedures have been in the nature of orthopedic otology, ignoring efforts to remove the underlying pathology. Meanwhile, but little attention was paid to research in the physiology of hearing and the pathology of deafness. Even so, we have gained now a better conception of cochlear function, and we developed the audiometer as a precise means for testing hearing.

Our present conception of treatment of chronic progressive deafness is that adequate treatment depends upon correct diagnosis. This frequently requires considerable study and observation. A comprehensive history and careful examination should give a good conception of the otological condition, its functional status and some idea of its probable etiology. When there are definite indications of tubal obstruction, we may employ the eustachian catheter, and sometimes the bougie. The treatment of deafness is the treatment of its cause, and the cause of tubal obstruction will be found usually in the sinuses or the nasopharynx. Recognition of probable factors such as lymphoid hypertrophy, sinusitis, enlarged posterior tips of inferior turbinates, nasopharyngeal cysts and tumors, or allergic manifestations should lead to more effective therapy.

We keep in mind the possibility of toxic absorption and strive to eradicate foci of infection when indicated. We consider the effect of occupation or environment, and realize the importance of good general health, and advise the correction of any nutritional or endocrine deficiency.

For the majority of the patients with established deafness, sufficient to be handicapping, correction by amplification will be preferable. Operative treatment may be suggested to those who, after critical study, meet all the requirements laid down as essential to successful fenestration. But, after all, we realize the impossibility of curing deafness, and all of our therapeutic efforts finally come down to prevention, and rehabilitation.—M. D. H., M.D.

"RIBOFLAVIN; SIGNIFICANCE OF ITS PHOTODYNAMIC ACTION AND IMPORTANCE OF ITS PROPERTIES FOR THE VISUAL ACT." M. Heiman. Archives of Ophthalmology. Vol. 28. Pp. 493-502. September. 1942.

In 1932, Warburg and Christian described the "yellow enzyme," of which riboflavin is an important part. The photodynamic action of flavin was soon recognized, and also the fact that this flavin can be found in large quantities in the retina. In 1935, Theorell stated that flavin has something to do with vision. In 1939, other observers related clinical ocular disease with visual disturbance to a deficiency of riboflavin. It was also found that administration of riboflavin can re-establish visual function in certain visual disorders characterized by dimness of vision, impaired visual acuity and photophobia.

The author experimented with riboflavin, and found that it belongs to the group of photodynamic substances. These experiments made in 1936 were later confirmed by other observers. Riboflavin is also characterized by its yellow-green fluorescence. The author believes that fluorescence and photodynamic action together are important functions, guaranteeing the proper function of the eye in reduced light. Riboflavin, by its photodynamic action, supports the visual function during weak light; it also forms a protection against strong light. The excess of light is screened off, and injury to the photosensitive cells is avoided. A dearth of riboflavin becomes noticeable clinically as photophobia.

The various clinical symptoms of ariboflavinosis are associated with different manifestations of the function of riboflavin. The dimness of vision corresponds to the photodynamic action and the fluorescence, being caused by their reduction. Since carotene is also present in the retina, it seems that both riboflavin and carotene share in these functions, but riboflavin excels carotene in importance in the visual act. Cones and riboflavin form a functional unit.—M. D. H., M.D.

"DINITROPHENOL AND ITS RELATION TO FORMATION OF CATARACT." Warren D. Horner, M.D., San Francisco. Archives of Ophthalmology. Vol. 27. No. 6. June. 1942.

This is an interesting subject about which much has been written. Since this is the most complete presentation of the subject that I have read, I am giving the author's own summary of the subject below.

1. The pharmacologic properties of four phases in the use of dinitrophenol are traced: (a) as a laboratory curiosity in 1895, (b) as a health hazard in the munitions industry (1914 to 1918), (c) as metabolic stimulant with possible clinical applications (1933), and (d) as a potent drug which was used in the treatment of obesity (1934-1935) and which exhibited certain unfortunate side reactions.

2. The majority of these reactions were trivial, a few were fatal, and a middle group, affecting the skin and the blood, were severe, but the most serious of all was the development of cataracts.

3. Cataracts occured with recommended doses of the drug and without other demonstrable reactions.

4. Cataracts developed in a total of more than 177 persons after the use of either dinitrophenol or dinitro-orthocresol, an estimated incidence of 0.86 per cent. Of the patients, 98 per cent were women who averaged about 45 years of age.

5. The cataracts, all of one type, were bilateral, developed rapidly, and were accompanied with visual loss and occurred at any time up to a year after the drug had been discontinued.

6. Medical treatment was without effect, but surgical extraction proved successful, excellent visual acuity being obtained in a large percentage of cases.

7. Late secondary cataract was of frequent occurrence after extraction, as was shown by a reported incidence of 88 per cent in one series.

8. All attempts to produce experimental cataracts in laboratory animals by various and repeated doses of dinitrophenol have been successful.

9. Dinitrophenol does not alter the permeability of the lens in vivo or in vitro, nor does it increase inordinately the oxygen consumption of the lens as compared with other tissues. It does not hasten or otherwise affect the artificial production of lactose cataracts in animals.

10. The cause of cataracts following the treatment of obesity with dinitro bodies is unknown, and its relation to the ingestion of these substances is unproved. The argumentative strength of post hoc, ergo propter hoc, cannot be denied, however. This argument has been used successfully to obtain monetary damages in medicolegal actions filed by patients.

11. Since the dinitro compounds found widespread and generally enthusiastic acceptance because of the beneficial results they produced, it is regrettable that they had to be discarded because of the secondary reactions. Additional studies are therefore needed to determine whether related products may not be developed that will retain the metabolic potency with a lessened amount of untoward effects or even their complete absence. Some attempts along this line have proved at least partially successful, and others will doubtless be made. The chief deterrent to such studies is the necessity of being certain that the animal experiments can safey be used as guides to the potential clinical toxicity of the compounds elaborated.—M. D. H., M.D.

KEY TO ABSTRACTORS

E. D. M. ..... Earl D. McBride, M.D.
H. J. ..... Hugh Jeter, M.D.
L. A. R. ..... Lea A. Riley, M.D.
M. D. H. ..... Marvin D. Henley, M.D.

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Beckham		E. S. Kilpatrick, Elk City	Second Tuesday
Blaine	Virginia Olson Curtin, Watonga	W. F. Griffin, Watonga	
Bryan	J. T. Colwick, Durant	W. K. Haynie, Durant	Second Tuesday
Caddo			
Canadian	P. F. Herod, El Reno	A. L. Johnson, El Reno	Subject to call
Carter	Walter Hardy, Ardmore	H. A. Higgins, Ardmore	
Cherokee	P. H. Medearis, Tahlequah	James K. Gray, Tahlequah	First Tuesday
Choctaw			
Cleveland			Thursday nights
Comanche			
Cotton			Third Friday
Craig	F. M. Adams, Vinita	J. M. McMillan, Vinita	
Creek	H. R. Haas, Sapulpa	C. G. Oakes, Sapulpa	
Custer	F. R. Vieregg, Clinton	C. J. Alexander, Clinton	Third Thursday
Garfield	Paul B. Champlin, Enid	John R. Walker, Enid	Fourth Thursday
Garvin	T. F. Gross, Lindsay	John R. Callaway, Pauls Valley	Wednesday before Third Thursday
Grady	Walter J. Baze, Chickasha	Roy E. Emanuel, Chickasha	Third Thursday
Grant	I. V. Hardy, Medford	E. E. Lawson, Medford	
Greer			
Harmon	W. G. Husband, Hollis	L. E. Hollis, Hollis	First Wednesday
Haskell	William Carson, Keota	N. K. Williams, McCurtain	
Hughes			First Friday
Jackson	E. S. Crow, Olustee	E. W. Mabry, Altus	Last Monday
Jefferson	F. M. Edwards, Ringling	L. L. Wade, Ryan	Second Monday
Kay	Philip C. Risser, Blackwell	J. Holland Howe, Ponca City	Third Thursday
Kingfisher	C. M. Hodgson, Kingfisher	H. Violet Sturgeon, Hennessey	
Kiowa	B. H. Watkins, Hobart	J. William Finch, Hobart	
LeFlore			
Lincoln	H. B. Jenkins, Tryon	Carl H. Bailey, Stroud	First Wednesday
Logan	William C. Miller, Guthrie	J. L. LeHew, Jr., Guthrie	Last Tuesday
Marshall	O. A. Cook, Madill	Philip G. Joseph, Madill	
Mayes			
McClain			
McCurtain	A. W. Clarkson, Valliant	N. L. Barker, Broken Bow	Fourth Tuesday
McIntosh	James L. Wood, Eufaula	William A. Tolleson, Eufaula	First Thursday
Murray			Second Tuesday
Muskogee-Sequoyah-Wagoner			First and Third Monday
Noble	C. H. Cooke, Perry	J. W. Francis, Perry	
Okfuskee	L. J. Spickard, Okemah	M. L. Whitney, Okemah	Second Monday
Oklahoma	Walker Morledge, Oklahoma City	E. R. Musick, Oklahoma City	Fourth Tuesday
Okmulgee	A. R. Holmes, Henryetta	J. C. Matheney, Okmulgee	Second Monday
Osage	C. R. Weirich, Pawhuska	George K. Hemphill, Pawhuska	Second Monday
Ottawa			Third Thursday
Pawnee			
Payne	L. A. Mitchell, Stillwater	C. W. Moore, Stillwater	Third Thursday
Pittsburg	John F. Park, McAlester	William H. Kaeiser, McAlester	Third Friday
Pontotoc			First Wednesday
Pottawatomie	A. C. McFarling, Shawnee	Clinton Gallaher, Shawnee	First and Third Saturday
Pushmataha	John S. Lawson, Clayton	B. M. Huckabay, Antlers	
Rogers	C. W. Beson, Claremore	C. L. Caldwell, Chelsea	First Monday
Seminole	Max Van Sandt, Wewoka	Mack I. Shanholtz, Wewoka	
Stephens			
Texas			
Tillman			
Tulsa	James C. Peden, Tulsa	E. O. Johnson, Tulsa	Second and Fourth Monday
Washington-Nowata	J. G. Smith, Bartlesville	J. V. Athey, Bartlesville	Second Wednesday
Washita			
Woods	C. A. Traverse, Alva	O. E. Templin, Alva	Last Wednesday
Woodward	C. E. Williams, Woodward	C. W. Tedrowe, Woodward	Second Thursday